REPUBLIC OF MALAWI

MINSTRY OF AGRICULTURE.

AGRICULTURAL RESEARCH DEVELOPMENT

- Major Agricultural Research Stations (Covered By This Project)
- Experimental Sub Stations (Covered By This Project
- Other Major Research Stations
- Other Sub Stations

Kafikisila

Baka

Hara

Nchenachena

Bolero

Lunyangwa

Limpisa

Mbawa

Dwangwa

Chitala

Chitedze

Monkey Bay Fisheries Research Station

Bunda College of Agriculture (University)

Chongoni Forest Research Institute

Bembeke

FORT JOHNSTON

NCHEU

Drawn and Printed by the Department of Surveys, Malawi. February 1970.

1970/71 DEVELOPMENT ESTIMATES
PROJECT SUBMISSION

PROJECT TITLE : IRRIGATION BRANCH

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/TECHNICAL SERVICES

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 15

BRITISH AIDED PROJECT NO. : 61

RELATED PROJECTS : Land Use Services
Settlement Brnach
Taiwan Technical Assistance
British Irrigated Rice Project
Salima Lakeshore Development Project

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings*	4,500	17,000	17,000	2,000	36,000
5 Other Construction	2,000	46,600	80,000	80,000	206,600
6 Plant and Vehicles	13,300	33,500	36,600	47,900	118,000
8 Personal Emoluments	5,548	27,224	30,036	31,750	89,010
9 Running Expenses	840	5,980	8,900	9,150	24,030
TOTAL	26,188	130,304	172,536	170,800	473,640
*21 Houses		14,000	14,000	2,000	30,000
22 Other Buildings		3,000	3,000	-	6,000

(b) Non-British, Non-Malawi Expenditure

	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
Irrigation Equipment - Spares	6,000	8,000	10,000	24,000

(c) Previous Expenditure

	£	Cumulative Total
To 31/12/67	2,989	2,989
1968 Actual Expenditure	58,867	61,856
1969 Printed Estimates	121,774	
1969 Revised Estimates	114,891	
1969 Estimated Carry-forward	-	

(d) Source of Finance

U.K. Development Loan.

2. PROJECT TARGET

To promote and develop irrigated agriculture giving particular attention to rice, for which settlement schemes and other programmes are initiated, in order to increase the quantity and quality for export.

Expected Completion Date: Continuing project, to be transferred to Revenue Account as soon as possible.

3. BACKGROUND INFORMATION

The Irrigation Branch was set up at the end of 1967. By the end of 1968 the first Settlement Scheme was nearing completion with over 100 farmers settled on 200 acres of irrigated rice at Hara in Karonga District. In addition to this four small pilot demonstration schemes were in operation throughout the country. At the end of 1969 the total irrigated acreage was 1,200 acres with over 500 farmers established on rice schemes. These extend from schemes in the South in the Lower Shire Valley to the extreme North in the Karonga District.

Details of existing schemes are as follows:

Settlement Schemes		Pilot Schemes
Kaporo (Karonga D)	100 acres	Salima (Salima D)
Hara (Karonga D)	450 acres	Kasindula (Chikwawa D)
Chonanga (Karonga D)	50 acres	
Limpasa Dambo (Nkhata Bay D)	220 acres	
Likangala (Zomba D)	420 acres	
	1240 acres	

4. PROPOSED WORK 1970/73

Survey investigation, design and soil survey are already in hand for a number of rice schemes. The original 1972 target for irrigated schemes was 2,000 acres (which is likely to be considerably exceeded) and by the time this has been implemented further areas will be under investigation.

The demonstration and pilot stage has now been completed and the proposed programme is a start on large scale exploitation of the available land and water resources. From 1973 onwards an annual increase of 2,000 acres under command should be possible.

The proposed programme for 1970/71 is as follows :-

Lufilya (Karonga D) - preliminary work
Mpyupa (Karonga D) - 400 acres
Limpasa Dambo (Nkhata Bay D) - 200 acres
Tiwi (Nkhota Kota D) - 300 acres
Likangala (Zomba D) - 400 acres

The recurrent costs of the supervisory personnel will have to be met from revenue account in due cource, though it may be possible to work out a system of fees for engineering services whereby revenue would accrue to offset these overheads from the construction funds allocated to the various schemes.

Costs of construction will eventually be met from specific schemes, once the pilot stage has successfully demonstrated that a large schme is economically justifiable.

Once schemes have been established the running costs of each scheme should be covered by the collection of water rates.

5. JUSTIFICATION FOR PROPOSED WORK

One of Malawi's greatest natural resources is an abundant supply of water, and a sound policy of national development requires the application of this water for agricultural purposes.

Rice has been considered to be a commodity from which Malawi can earn a significant amount of foreign exchange; in particular there is considerable potential for the export of rice to South Africa. It is an aim of Malawi's agricultural policy to take advantage of this opportunity, as rice has been shown to be a commodity with a relatively stable price and a rapidly increasing demand.

Existing trials and schemes have shown that the newly imported varieties, developed elsewhere for their high yield, give excellent results under Malawi's climatic conditions, and this together with improved management on irrigation schemes, has given rice cultivation an exceptionally high rate of return on capital spent per acre developed.

6. EXECUTION AND SUPERVISION

The project will be carried out by the Technical Services Branch of the Ministry of Agriculture.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : IRRIGATION BRANCH

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/TECHNICAL SERVICES

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 15

BRITISH AIDED PROJECT NO. : 61

1. PROJECT OFFICER

Chief Irrigation Engineer.

2. FINANCIAL DETAILS

(a) Details of Expenditure	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings						
8 DL Houses (W)	(1)		12,000	12,000	-	24,000
6 PL Houses (W)	(2)	4,500	2,000	2,000	2,000	6,000
Office Accommodation (M)	(3)		3,000	3,000	-	6,000
		4,500	17,000	17,000	2,000	36,000
5 Other Construction						
Work on Irrigation Projects (Direct Costs)	(4)	2,000	46,600	80,000	80,000	206,600
6 Plant and Vehicles						
See attachment for details	(5)	13,300	33,500	36,600	47,900	118,000
8 Personal Emoluments						
Chief Irrigation Engineer	(6)	550	2,200	2,400	2,400	7,000
Senior Irrigation Engineer	(7)	510	2,040	2,200	2,200	6,440
Senior Agricultural Officer	(8)	490	1,950	1,950	1,950	5,850
Irrigation Engineers	(9)	1,048	5,674	5,986	6,100	17,760
Technical Officers	(10)	900	5,000	6,000	7,000	18,000
Clerical Officers	(11)	200	900	900	900	2,700
Stenographer	(12)	300	1,200	1,200	1,200	3,600
Typist	(13)	80	300	300	300	900
Others	(14)	1,050	6,030	6,100	6,200	18,330
Irrigation Assistants	(15)	420	1,930	3,000	3,500	8,430
		5,548	27,224	30,036	31,750	89,010
9 Running Expenses						
Transport and Travelling	(16)	500	3,000	3,250	3,500	9,750
Maintenance and Running Expenses	(17)	340	1,350	3,150	3,150	7,650
Office Equipment	(18)	-	390	1,000	1,000	2,390
Material & Instruments for Surveying and Drawing	(19)	-	1,240	1,500	1,500	4,240
		840	5,980	8,900	9,150	24,030
TOTAL		26,188	130,304	172,536	170,800	473,640

(W) = As costed for construction by Ministry of Works and Supplies.

(M) = As costed for construction by Ministry of Agriculture.

(b) Notes on Expenditure

(1) Houses will be built as follows :-

3 DL Karonga/Hara at £3600	=	£10,800
1 DL Limpasa at £3,100	=	3,100
2 DL Nkhota Kota at £3,300	=	6,600
1 DL Tengadzi at £3,100	=	3,100
1 DL Likangala at £2,800	=	2,800
(2) 2 PL Karonga at £710	=	1,420
2 PL Nkhota Kota at £680	=	1,360
2 PL Likangala at £600	=	1,200

(3) Office accommodation will be required at Karonga, Limpasa and Likangala.

(4) By the end of 1970 we should be in a position to expand activities beyond the pilot scheme stage and accelerate the rate of construction of paddy rice schemes to something of the order of 2,000 acres per year.

The total costs of schemes being constructed at the moment is about £150 per acre, of this on average about £80 is direct cost and the rest operation overheads. As total acreage increases it is expected that costs will fall considerably. It would obviously be advantageous to increase the tempo of development by making more use of the professional and technical staff available thereby reducing the overall cost per acre developed.

(5) The case for excavating plant has been repeatedly stressed. We are now moving out of the purely pilot experimental scheme stage to the level where our schemes are making a noticeable impact on national output and further construction equipment is required. The attached table gives the proposed programme.

The agricultural tractors, rotavators and ploughs will be required for the initial cultivation of schemes, it being our policy to do the initial breaking up of the land for the first year's crop, thereafter the settlers will cultivate with oxen.

(6) One Chief Irrigation Engineer's Post is provided.

(7) One Senior Irrigation Engineer's Post is provided.

(8) One Senior Agricultural Officer's Post is provided.

(9) Five Irrigation Engineers' Posts are provided.

(10) Eight Technical Officers' Posts are provided for 1970, ten for 1971 and twelve for 1972.

(11) Two clerical officers will be required for the efficient running of the headquarters organisation.

(12) One stenographer is provided for the Chief and Senior Irrigation Engineer.

(13) One typist is provided. Experience has shown that this clerical staff is the minimum for the headquarters organisation.

(14) Others

10 Drivers	£2,000
1 Mechanical Supervisor (T.O.)	430
1 Fitter (T.A.)	300
3 Plant Operators (part)	900
6 Clerks	1,300
2 Storekeepers	460
8 Messengers	640
TOTAL	£6,030

Temporary clerical staff are required for site construction works.

(15) Irrigation Assistants, 10 posts are provided for 1970 fifteen for 1971 and twenty for 1972.

(16) Required for increased staff.

(17) Required for running vehicles not specifically charged to a particular scheme.

3 Landrovers to end of 1970 - 7 Landrovers thereafter at £340 each.

Included is provision for office telephone rental and charges.

(18) It is proposed to purchase in 1970:

1 Calculating machine	£270
3 Adding machines	120
	£390

(19) The purchase of the following items is proposed in 1970/71:

1 current meter	£630
1 theodolite	375
6 Survey staffs	75
6 Drawing Boards and Accessories	100
6 Sets scales	60
	£1,240

(c) Import Content

See separate schedule for Ministry of Agriculture.

(b) Breakdown of Expenditure by Region

	Jan-Mar 1970				1970/71				1971/72				1972/73			
	S	C	N	HQ	S	C	N	HQ	S	C	N	HQ	S	C	N	HQ
2 Buildings	-	-	-	-	3000	-	14000	-	6000	8000	3000	-	1000	-	1000	-
5 Other Construction	500	200	800	500	12000	12000	22600	-	20000	20000	35000	5000	25000	25000	25000	5000
6 Plant and Vehicles	-	-	-	-	-	-	-	33500	-	-	-	36600	-	-	-	47900
8 Personal Emoluments	1000	500	2000	2048	3000	5000	13224	6000	5000	8000	9036	8000	6000	8714	9036	8000
9 Running Expenses	300	100	300	140	500	1000	2480	2000	1000	2000	3400	2500	1000	2000	3400	2750
TOTAL	1800	800	3100	2688	18500	18000	52304	41500	32000	38000	50436	52100	33000	35714	38436	63650

3. LOCATION OF CONSTRUCTION

See Notes (1), (2) and (3) above.

(Attachment to Note 5)

IRRIGATION BRANCH

MECHANICAL PLANT UNIT

Item	Description	Total Required	Existing	Required 1970/73	Rate £	Amount 1970/3	To be purchased 1970	Rate	Amount
1	Lorries 5 and 7½ ton	12	3	9	2,000	18,000	4	2,000	8,000
2	Landrovers	8	4	4	1,200	4,800	4	1,200	4,800
3	Excavators	8	1	7	7,000	49,000	3	7,000	21,000
4	Mixer and Vibrators	8	2	6	500	3,000	3	500	1,500
5	Water Bowsers	8	1	7	300	2,100	3	300	900
6	165 Tractors and Equipment	12	-	12	1,500	18,000	4	1,500	6,000
7	Graders	2	1	1	8,000	8,000			
8	Contractors pumps	8	2	6	300	1,800	2	300	600
9	Mud pumps	8	2	6	300	1,800	2	200	400
10	Dumpers	8	-	8	400	3,200	4	400	1,600
11	Compressor and Tools	2	-	2	7,000	14,000			
12	Caravans	4	2	2	1,300	2,600			
13	Miscellaneous small tools	L.S.	-		5,000	5,000	L.S.	2,000	2,000
	TOTALS					131,300			46,800

(a) Section 7 Accounts kept by Engineer

1970/71 DEVELOPMENT ESTIMATES
PROJECT SUBMISSION.

PROJECT TITLE : HOUSING FOR AGRICULTURAL EXTENSION STAFF

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/EXTENSION

MALAWI DEVELOPMENT ESTIMATES, 1969 : HEAD 77 ITEM 17

BRITISH AIDED PROJECT NO. : 60

RELATED PROJECTS : Most Agricultural Projects

1. FINANCIAL SUMMARY.

(a) Funds Requested.

Category	Jan/Mar. 1970	1970/1	1971/2	1972/3	TOTAL 3 YEARS
2 Buildings*	35,000	83,500	71,900	71,900	227,300
TOTAL	35,000	83,500	71,900	71,900	227,300
*21 Houses	35,000	83,500	71,900	71,900	227,300

(b) Non-British, Non-Malawi Expenditure.

Nil

(c) Previous Expenditure.

	£	Cumulative Total
To 31/12/67	-	-
1968 Actual Expenditure	63,080	63,080
1969 Printed Estimates	66,484	-
1969 Revised Estimates	31,484	-
1969 Estimated Carry-forward	35,000	-
of which Jan/March 1970	35,000	-

(d) Source of Finance.

U.K. Development Loan.

2. PROJECT TARGET.

To provide housing for existing and new agricultural extension staff throughout Malawi.

Expected Completion Date:

There is likely to be a continuing expansion in the numbers of extension staff.

3. BACKGROUND INFORMATION.

The staff housing shortage in the Ministry of Agriculture remains critical. If the Ministry is to recruit and retain the services of qualified men to fill the various posts available at present and in the future it is essential to supply adequate housing for them. In the rural areas Government is obliged to build houses for agricultural staff since no alternative source is available.

4. PROPOSED WORK 1970/73.

In 1970/71 it is proposed to build four houses for technical officers, thirteen for senior technical assistants or junior technical officers and 60 for technical assistants. In 1971/72 and 1972/73, the plan is for houses for 4 technical officers, 9 senior technical assistants and 53 technical assistants. Construction will be in those areas where the need is greatest, to facilitate the development of the extension programme.

5. JUSTIFICATION FOR PROPOSED WORK.

It is impossible to recruit or retain extension staff of high calibre unless they can be offered housing equivalent to that which they could obtain in other employment. Housing of this standard does not exist in rural areas where agricultural extension staff must live. A re-examination of staff needs is being carried out in the Ministry of Agriculture and the future of this project will be considered in the light of its findings.

6. EXECUTION AND SUPERVISION.

Work will be carried out on behalf of the Ministry of Agriculture by the Ministry of Works and Supplies or by local contractors.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE	: HOUSING FOR AGRICULTURAL EXTENSION STAFF
RESPONSIBLE MINISTRY/DEPARTMENT	: AGRICULTURE/EXTENSION
MALAWI DEVELOPMENT ESTIMATES, 1969	: HEAD 77 ITEM 17
BRITISH AIDED PROJECT NO.	: 60

1. PROJECT OFFICER.

The Chief Agricultural Extension Officer.

2. FINANCIAL DETAILS.

(a) Details of Expenditure.

	Notes	Jan/Mar 1970	1970/1	1971/2	1972/3	TOTAL 3 YRS.
2 Buildings (C)						
DH/TL type houses	(1)	35000	16,000	16,000	16,000	48000
EH/EL type houses	(2)		19,500	13,500	13,500	46500
PH/TL type houses	(3)		48,000	42,400	42,400	132000
TOTAL		35000	83,500	71,900	71,900	227300

(C) = Costed for construction by contract.

(b) Notes on Expenditure.

(1) DH/DL type houses - required at Area Headquarters for area supervisors and also for senior technical officers at Regional and Divisional Headquarters.

(2) EH/DL type houses required for more senior technical assistants and more junior technical officers.

(3) PH/PL type houses required for technical assistants.

Breakdown of Proposed Construction by Year.

Type	Estimated Average Price	1970/1	1971/2	1972/3
DH/DL type	4,000	4	4	4
EH/EL type	1,500	13	9	9
PH/PL type	800	60	53	53

(c) Import Content

See separate schedule for Agriculture.

(d) Breakdown of Expenditure by Region.

These suggestions are tentative and liable to be revised.

	1970/71			1971/72			1972/73		
	S	C	N	S	C	N	S	C	N
DH/DL Type	4000	8000	4000	8000	8000	-	8000	4000	4000
EH/EL Type	7500	9000	3000	4500	6000	3000	6000	4500	3000
PH/PL Type	19200	21600	7200	18400	16800	7200	19200	16000	7200
TOTAL	30700	38600	14200	30900	30800	10200	33200	24500	14200

3. LOCATION OF CONSTRUCTION.

	'D' Type	'E' Type	'P' Type
Southern Region	1	5	24
Central Region	2	6	27
Northern Region	1	2	9

The individual sites are not yet finalised but the following are known:

Salima Farm Institute	1 'D' Type
	2 'E' Type
	3 'P' Type.

1970/71 DEVELOPMENT ESTIMATES
PROJECT SUBMISSION

PROJECT TITLE : SETTLEMENT BRANCH

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/TECHNICAL SERVICES

SUB-PROJECTS : (A) SETTLEMENT BRANCH OVERHEAD COSTS
(B) DIRECT SETTLEMENT COSTS
(C) SETTLEMENT AGRICULTURAL CREDIT FUND

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 20

BRITISH AIDED PROJECT NO. : 77

RELATED PROJECTS : Land Use Service
Irrigation Branch

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings*	7,000	24,025	7,650	12,750	44,425
5 Other Construction	-	2,900	2,900	2,900	8,700
6 Plant and Vehicles	-	5,248	2,375	4,575	12,198
8 Personal Emoluments	4,358	22,288	30,414	40,650	93,352
9 Running Expenses	7,580	33,605	34,915	36,280	104,800
10 Special Expenditure	-	14,458	15,151	13,162	42,771
TOTAL	18,938	102,524	93,405	110,317	306,246
*21 Houses	7,000	24,025	7,650	12,750	44,425

(b) Non-British, Non-Malawi Expenditure

Not expected.

(c) Previous Expenditure

	£	Cumulative Total
To 31/12/67	-	-
1968 Actual Expenditure (Local)	15,786	15,786
1969 Printed Estimates	55,506	
1969 Revised Estimates	46,806	
1969 Estimated carry-forward	8,700	
Of which: Jan/Mar 1970	8,700	

(d) Source of Finance

U.K. Development Loan.

2. PROJECT TARGET

The targets for the sub-projects are as follows :-

(A) Settlement Branch Overhead Costs

To supply the supervisory staff and their overhead costs such as housing and transport for the intensive extension, credit facilities and organised marketing required on settlement schemes. It also provides for the cost of the infrastructure, including survey, boundary demarcation, roads and water supplies, required for the settlement of some 250 settlers a year, who will be settled on schemes outside of irrigation projects or major projects, where this infrastructure is already provided.

The sub-project falls into three parts :-

(a) The settlement of Malawi Young Pioneers and local farmers onto economically viable dry land plots where improved cash crop farming can be practised.

(b) The supervision of the settlement of Young Pioneers and local farmers on irrigation projects by providing extension staff and supervising credit and marketing organisations.

(c) The technical guidance for the resettlement of people moved from areas required for various development projects.

(B) Direct Settlement Costs

To provide the finance necessary for the settlement of Young Pioneers on dry land and irrigated settlement schemes at the rate of 700 per year. This sub-project will cover costs of providing temporary accommodation on arrival at the scheme, the cost of materials for house construction, the provision of simple farm tools and the payment of an allowance of £1 per month during the settler's first year until his harvest. This is estimated at £29 per settler.

(C) Settlement Agricultural Credit Fund

To establish a Credit Fund for settlement schemes throughout Malawi. The Fund will be used for short term crop finance on dry land and irrigated settlement schemes and, to a lesser extent, for medium term finance for such items as cotton sprayers and work oxen. This Fund will be used in the first few years of settlement to enable the settler to become established so that his plot will be self-financing at fairly high levels of cash inputs.

Expected Completion Date

(A) This is a continuing sub-project that will be absorbed into Revenue Account as funds permit.

(B) This will be a continuing sub-project. It is however estimated that by 1975 repayments by way of Development Charges will be generating sufficient funds to cover direct settlement costs.

(C) This will be a continuing sub-project but the Fund will require no further topping up after 1975/76 when, at the present rate of settlement, it will stabilize at £53,100.

3. BACKGROUND INFORMATION

The Government decided in 1968 to launch a programme to settle 500 Malawi Young Pioneers a year. The intention was to make as full a use as possible of the valuable training in agriculture these young people have had and to demonstrate to surrounding traditional areas the benefits of organised cash crop farming.

(The rate of settlement has now been increased to 1,000 families a year, of which 700 will be Young Pioneers and the balance local village farmers. This increase has been brought about mainly by the influence of the irrigation schemes and their need for intensive supervision after construction.) Settlement sbhemes at present in operation are shown below :-

Scheme	Note	Region	Year of Establishment	Main Crop	Acres of Scheme	No. of Settlers
Hara (I)		Northern	1968	Rice	520	258
Limpasa (I)		"	1969	Rice	200	102
Thulwe		"	1969	Cotton Tobacco	350	21
Kaporo (I)	1	"	1968	Rice	108	54
Salima	2	Central	"	Cotton Groundnuts	5,685	267
Namitete		"	"	Groundnuts Tobacco	3,000	182
Mangulenje	3	Southern	"	Cotton	2,714	177
Rivi Rivi		"	"	Cotton	4,250	86
Chikonje	4	"	1967	Cotton	290	21
Likangala (I)		"	1969	Rice	450	265
TOTAL					17,567	1,433

I = Irrigation Schemes.

(1) Construction financed by Taiwan Technical Assistance.

(2) Part financed by German Technical Aid.

(3) Part [illegible]

(4) Financed by OXFAM.

The direct settlement costs are repayable by way of a Development Charge. This charge is spread over five years on a graduated scale. The total Development Charge is £40, which includes assistance rendered under this project and assistance given to the settlers by the Malawi Young Pioneers organisation. Repayments are one annual instalment of £3, one annual instalment of £8 and three annual instalments of £12, giving a total of £47 which includes an interest element of approximately 5%.

To enable rapid development of settlement holdings it is essential that the settler is able to utilise high levels of inputs. As the settlers do not have the reserves to finance these inputs themselves they have to be assisted by credit.

It is estimated that on the two main types of settlement schemes - dry land cotton and irrigated rice, credit is required for the following numbers of settlers :-

Year of Settlement			1	2	3	4	5
1970/71	Cotton		79	35	22		
	Rice	1st Crop	519	84			
		2nd Crop	200	60			
1971/72	Cotton		200	79	35	22	
	Rice	1st Crop	500	519	84		
		2nd Crop	200	200			
1972/73	Cotton		200	200	79	35	22
	Rice	1st Crop	500	500	519		
		2nd Crop	200	200			

Settlement Agricultural Credit Fund - Credit Requirement per Settler

Year of Settlement		1	2	3	4	5
Cotton	(Short Term)	£17	£24	£24	£25	£15
	(Medium Term)	£ 6	£ 6	£ 6	-	-
Rice	(Short Term)	£8.10s.	£8.10s.	-	-	-
	(Medium Term)	£ 5	£ 5	£ 5	-	-
Rice (2nd Crop)	(Short Term)	£8.10s.	£8.10s.	-	-	-
	(Medium Term)	-	-	-	-	-

N.B. Due to phasing out of fertiliser subsidies the figures in the above table increase in subsequent years.

Credit requirement on cotton schemes covers insecticides, spraying machines, fertilizers for food crop and seed for food crops in the first year. On rice schemes credit is required for seed, fertilizer, work oxen and their necessary equipment.

Short term crop credit is for one season and repayable from that crop together with a service charge at present of 5%. Medium term credit is repayable over two years with a service charge at present of 5% per year.

4. PROPOSED WORK 1970/73

(A) The Government's present intention is to carry out a regular programme of 1,000 settlers per annum made up approximately as follows :-

Irrigation Schemes	500
Salima (Major Project) - Dry Land	250
Other Dry Land Schemes	250
	1,000

The resettlement as a result of other development projects is not included in the above figures but will have to be met as the need arises.

Thus at the end of 1972/73 the Settlement Branch will be responsible for the supervision of approximately 4,500 regular settlers.

Settlement will take place on irrigated schemes designed and constructed by the Irrigation Branch, and on dry land schemes planned and laid out by the Land Use Branch.

On dry land schemes settlement will be on planned economic holdings. Plot sizes will be such as to give the settler a net income of £80 - £100, but within the capacity of the settler's family with a minimum of hired casual labour. Holdings on irrigation schemes are designed to give a similar net income.

The Settlement Branch will administer a short term crop credit service for crop inputs on the settlement schemes (finance supplied under Sub-Project C) and will endeavour to provide improved marketing facilities at scheme level in co-operation with the Farmers' Marketing Board.

In order for settlement schemes to be viable, survey and demarcation of plots incorporating approved soil conservation measures are required. It is also essential that potable water be supplied for the settlers and that access roads are available to all plots. Funds for these requirements are included in this sub-project.

(B) To provide temporary accommodation, house building materials, farm tools and subsistence allowances for 700 Malawi Young Pioneer settlers per annum.

(C) To provide the funds for the necessary credit to settlers as detailed above and to arrange the repayment of this credit.

5. JUSTIFICATION FOR PROPOSED WORK

Considerable emphasis is placed by the Government on the part that young people can play in National Development. This project is intended to enlist young people in demonstrating improved agricultural methods by participating in organized cash crop farming. The settlement schemes will themselves produce surplus crops for export thereby contributing to the prosperity of the Nation, and will also provide an example of cash crop orientated farming to the surrounding traditional subsistance farming areas to encourage them to follow improved farming methods and increase their incomes.

The Pioneer farmers are young, have no reserves of their own, and require assistance during their first year of settlement to enable them to become established and to concentrate on the development of their holdings. This project, along with food assistance from the World Food Programme, provides the basic necessities prior to the first harvest.

A credit service is essential if the farmers are to produce surplus crops for sale.

6. EXECUTION AND SUPERVISION

The project will be executed and supervised by the Principal Settlement Officer, who is directly responsible to the Chief Agricultural Technical Services Officer.

[illegible]

[illegible]

[illegible]

1970/71 DEVELOPMENT ESTIMATES

ATTACHMENT TO PROJECT SUBMISSION 'SETTLEMENT BRANCH'

BREAKDOWN OF CATEGORIES BY SUB-PROJECT :-

	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings					
(A)	7,000	24,025	7,650	12,750	44,425
5 Other Construction					
(A)	-	2,900	2,900	2,900	8,700
6 Plant and Vehicles					
(A)	-	5,248	2,375	4,575	12,198
8 Personal Emoluments	4,358	22,288	30,414	40,650	93,352
9 Running Expenses					
(A)	7,580	13,305	14,615	15,980	43,900
(B)	-	20,300	20,300	20,300	60,900
Total Running Expenses	7,580	33,605	34,915	36,280	104,800
10 Special Expenditure					
(C)	-	14,458	15,151	13,162	42,771
TOTAL SETTLEMENT BRANCH	18,938	102,524	93,405	110,317	306,246

BREAKDOWN OF PROJECTS BY CATEGORY :-

	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
(A) Settlement Branch Overhead Costs					
2 Buildings	7,000	24,025	7,650	12,750	44,425
5 Other Construction	-	2,900	2,900	2,900	8,700
6 Plant and Vehicles	-	5,248	2,375	4,575	12,198
8 Personal Emoluments	4,358	22,288	30,414	40,650	93,352
9 Running Expenses	7,580	13,305	14,615	15,980	43,900
(B) Direct Settlement Costs					
9 Running Expenses	-	20,300	20,300	20,300	60,900
(C) Settlement Agricultural Credit Fund					
10 Special Expenditure	-	14,458	15,151	13,162	42,771
TOTAL SETTLEMENT BRANCH	18,938	102,524	93,405	110,317	306,246

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

SUB-PROJECT : (A) SETTLEMENT BRANCH OVERHEAD COSTS

PROJECT TITLE : SETTLEMENT BRANCH

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/TECHNICAL SERVICES

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 20

BRITISH AIDED PROJECT NO. : 77

1. PROJECT OFFICER

Principal Settlement Officer.

2. FINANCIAL DETAILS

(a) Details of Expenditure	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings						
2 CH10/11 Houses (W & C)	(1)	7,000	11,000	-	-	11,000
EH5/EL2 Houses (M)	(2)	-	1,850	2,700	4,500	9,050
2 Z Houses (W)	(3)	-	7,875	-	-	7,875
PH/PL Houses (W)	(4)	-	3,300	4,950	8,250	16,500
		7,000	24,025	7,650	12,750	44,425
5 Other Construction						
Temporary Housing (M)	(5)	-	2,000	2,000	2,000	6,000
Office accommodation (M)	(6)	-	900	900	900	2,700
		-	2,900	2,900	2,900	8,700
6 Plant and Vehicles						
Land Rover	(7)	-	1,100	-	2,200	3,300
5 Ton Flat Lorry	(8)	-	1,773	-	-	1,773
Motor Bikes	(9)	-	450	450	450	1,350
Tractors and trailers	(10)	-	1,925	1,925	1,925	5,775
		-	5,248	2,375	4,575	12,198
8 Personal Emoluments						
Principal Settlement Officer	(11)	688	2,750	2,750	2,750	8,250
Technical Officers Grade III	(12)	760	4,450	5,400	5,400	15,250
Executive Officer Grade III	(13)	-	1,000	1,100	1,500	3,600
Technical Officer Grade I/II	(14)	1,100	5,500	7,764	10,594	23,858
Technical Assistants	(15)	350	2,140	3,752	5,506	11,398
Development Assistants	(16)	820	3,296	4,724	7,338	15,358
Clerical Officers	(17)	150	1,192	2,919	5,512	9,623
Drivers	(18)	250	1,000	1,000	1,000	3,000
Others	(19)	240	960	1,005	1,050	3,015
		4,358	22,288	30,414	40,650	93,352
9 Running Expenses						
M. & R.E.	(20)	540	6,210	6,810	7,410	20,430
T. & T.	(21)	300	1,895	2,405	3,170	7,470
Tools and Equipment	(22)	90	500	500	500	1,500
Repairs to houses	(23)	200	200	400	400	1,000
Settlement Infrastructure costs	(24)	4,200	4,500	4,500	4,500	13,500
Monthly Allowances		2,250	-	-	-	-
		7,580	13,305	14,615	15,980	43,900
TOTAL		18,938	67,766	57,954	76,855	202,575

Revenue

It is not anticipated that any direct revenue will accrue to this Project. However by the ope ning up of new land and exploiting the potential of irrigated lands it is anticipated that there will, as a result of the project, be an increase in the general Government Revenue.

Notes on Expenditure

(1) For T.O. III posted to Central Region and Senior Executive Officer.

(2) For T.O. I/II resident on schemes - 2 @ £925.

(3) For T.A.'s and Clerical Officers resident on schemes. 9 @ £875. (these are semi-detached quarters)

(4) For T.A.'s and C.O.'s resident on schemes - 6 @ £550.

(5) For D.A.'s resident on schemes - traditional type houses 32 @ £50 plus stores and tentage.

(6) For office accommodation on schemes.

(7) For T.O. III Central Region.

(8) For Central Region (one lorry per Region).

(9) For T.O. I/II resident on schemes.

(10) Tractors, trailers and ploughs to cart materials on schemes and to assist with cultivation on irrigated schemes.

(11) Salary includes inducement allowance as Officer is on Intermediate Contract.

(12) Additional T.O. III to be recruited in 1970, salary as from June 1970.

(13) Senior Executive Officer to administer the settlement credit fund. Provision is made to upgrade to Chief Executive Officer in 1972/73.

(14) Staffing rate based on one T.O. I/II, 2 T.A. and 4 D.A. per 200 settlers (approximately one scheme). T.O. I/II salary scale B3/B4 12 in 1970/71 15 in 1971/72, 20 in 1972/73.

(15) T.A. salary scale C3/C2. 16 in 1970/71, 24 in 1971/72, 34 in 1972/73.

(16) Development Assistants, salary scale C4/F3. 32 in 1970/71, 44 in 1971/72, 64 in 1972/73.

(17) Clerical Officers' salary scale CL/C3. Required at scheme level for administration on the scheme and operation of settlement credit. 8 in 1970/71, 11 in 1971/72, 16 in 1972/73.

(18) 5 drivers at an average of £200.

(19) Head Office staff - stenographic assistance, clerks, messengers, etc.

(20) 4 Land Rovers @ £450, 3 Lorries @ £600, 12/17/22 Motor bikes @ £30, 5/6/7 tractors @ £450.

(21) T. & T. Senior Staff @ £200, Junior Staff @ £15.

(22) For pisé moulds etc. for house building, office equipment, etc.

(23) For repairs to houses on Estates taken over for resettlement.

(24) The cost of infrastructure (survey, skeletal planning, roads, boreholes) for settlers, settled on dry land schemes outside Major Projects. 250 settlers @ £18. As much survey land layout is done from December/April £4,200 has been allowed for layout in this period.

(c) Import Content

See separate schedule for Ministry of Agriculture.

(d) Breakdown of Expenditure by Region

(See next page)

3. LOCATION OF CONSTRUCTION

CH 10 Houses - 1. Lilongwe
1. Kasungu

EH 5/EL 2 Houses - 1. Thulwe Scheme - Rumpi District
1. Tangadzi Forest - Nsanje District

2 Z Houses - 1. Hara - Karonga South
1. Limpasa - Nkhata Bay
1. Thulwe - Rumpi
4. Likangala - Zomba
1. Wovwe - Karonga South
1. Tangadzi Forest - Nsanje

PH/PL Houses - 1. Hara
1. Limpasa
1. Thulwe
1. Namitete
1. Wovwe

(a) Breakdown of Expenditure by Region

	Jan-Mar 1970				1970/71				1971/72				1972/73			
	N	C	S	HQ	N	C	S	HQ	N	C	S	HQ	N	C	S	HQ
2 Buildings	-	-	7000	-	6625	11550	5850	-	2550	2550	2550	-	5550	3650	3550	-
5 Other Construction	-	-	-	-	1620	200	1080	-	1400	700	800	-	1400	700	800	-
6 Plant and Vehicles	-	-	-	-	2095	2883	270	-	270	1925	180	-	3205	180	1190	-
8 Personal Emoluments	1140	619	1668	931	6750	4975	6853	3710	8616	9850	8193	3755	11788	13398	11664	3800
9 Running Expenses	3280	1895	2165	240	5160	2820	4460	865	5160	3900	4675	880	5720	4440	4940	880
	4420	2514	10833	1171	22250	22428	18513	4575	17996	18925	15398	4635	27663	22368	22144	4680

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

SUB-PROJECT : (B) DIRECT SETTLEMENT COSTS

PROJECT TITLE : SETTLEMENT BRANCH

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/TECHNICAL SERVICES

MALAWI DEVELOPMENT ESTIMATES 1969 : NEW PROJECT

BRITISH AIDED PROJECT NO. : NEW PROJECT

1. PROJECT OFFICER

Principal Settlement Officer.

2. FINANCIAL DETAILS

(a) Details of Expenditure	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
9 Running Expenses						
Settlement Costs	(1)	-	11,900	11,900	11,900	35,700
Settlers Allowances	(2)	-	8,400	8,400	8,400	25,200
TOTAL		-	20,300	20,300	20,300	60,900

Revenue

Revenue will accrue to this project by way of Development Charges payable by the settlers. These charges are a total of £40 over 5 years at approximately 5% interest per annum on the outstanding balance. The development charge includes the direct settlement costs under this project and also the costs covered directly by the Malawi Young Pioneers in establishing the settlers - £29 and £11 respectively.

The following table shows the number of persons already settled and estimated number for 1970-73:

	1968	1969	1970	1971	1972	1973
Dry land	398	388	450	350	350	350
Irrigated	52	118	250	350	350	350
TOTAL	450	506	700	700	700	700

Due to the difficulties of establishment and clearing on dry land schemes these settlers will not be due to pay their first instalment of the development charge until their second harvest. Due to administrative difficulties the first repayments of development charges occur in 1970, i.e. from the 69/70 crop year.

Year	70/71	71/72	72/73	73/74	74/75	75/76	76/77	77/78
Principal	568	4,074	10,539	18,318	26,813	28,360	29,173	28,000
(i) Interest	1136	2,384	3,781	4,654	4,959	4,996	4,926	4,900
Principal	412	2,954	7,641	13,281	19,439	20,561	21,124	20,300
(ii) Interest	824	1,728	2,741	3,374	3,595	3,622	3,571	3,551

It is anticipated that the interest element will cover any bad debts.

Notes (i) Revenue calculated on the total development charge of £40 per settler.

(ii) Revenue calculated on the basis of Development Charge due to this project £29 per settler (i.e. $\frac{29}{40}$ as of (i)).

On a continuing programme of 700 settlers per year funds will be required as follows :-

Year	70/71	71/72	72/73	73/74	74/75	75/76	76/77	77/78
Total Requirement	20,300	20,300	20,300	20,300	20,300	20,300	20,300	20,300
Revenue	412	2,954	7,641	13,281	19,439	20,561	21,124	20,300
Balance	19,888	17,346	12,659	7,019	861	-261	-824	-

(b) Notes on Expenditure

(1) Estimated at £10 per settler for provision and transport of house building materials, £5 per settler for temporary accommodation, £2 per settler for small farm tools.

(2) Allowances at £1 per month for 12 months prior to first harvest.

(c) Import Content

See separate schedule for Agriculture.

(d) Breakdown of Expenditure by Region

	1970/71			1971/72			1972/73		
	S	C	N	S	C	N	S	C	N
9 Running Expenses	3625	8700	7975	2900	8700	8700	2900	8700	8700

3. LOCATION OF CONSTRUCTION

Not applicable

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

SUB-PROJECT : (C) SETTLEMENT AGRICULTURAL CREDIT FUND

PROJECT TITLE : SETTLEMENT BRANCH

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/TECHNICAL SERVICES

MALAWI DEVELOPMENT ESTIMATES 1969 : NEW PROJECT

BRITISH AIDED PROJECT NO. : NEW PROJECT

1. PROJECT OFFICER

Principal Settlement Officer.

2. FINANCIAL DETAILS

(a) Details of Expenditure

	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
10 Special Expenditure	(1)	-	14,458	15,151	13,162	42,771

Revenue

Revenue will accrue directly to this project as all funds are expended on a credit basis.

Anticipated cash flow, principal only is shown below. This cash flow chart shows expenditure and revenue up to 1975/76 when the fund should stabilise at £53,100.

	CREDIT REQUIRED			REPAYMENTS (REVENUE)			
	TOTAL	SHORT TERM	MEDIUM TERM	SHORT TERM	MEDIUM TERM	TOTAL	REQUIRED TO TOP UP
70/71	14,458	10,627	3,831	-	-		14,458
71/72	27,694	20,715	6,979	10,627	1,916	12,543	15,151
72/73	39,381	31,407	7,874	20,715	5,404	26,119	13,162
73/74	45,600	37,000	8,600	31,407	7,427	38,834	6,766
74/75	51,285	42,685	8,600	37,000	8,237	45,237	5,948
75/76	53,100	44,500	8,600	42,685	8,600	51,285	1,815
76/77	53,100	44,500	8,600	44,500	8,600	53,100	-

(b) Notes on Expenditure

(1) Amount required to top up the credit fund.

(c) Import Content

See separate schedule for Ministry of Agriculture.

(d) Breakdown of Expenditure by Region

	1970/71			1971/72			1972/73		
	N	C	S	N	C	S	N	C	S
10 Special Expenditure	7247	3605	3606	7000	4000	4151	5000	4000	4162

3. LOCATION OF CONSTRUCTION

None.

1970/71 DEVELOPMENT ESTIMATES
PROJECT SUBMISSION

PROJECT TITLE	:	TOBACCO DEVELOPMENT
RESPONSIBLE MINISTRY/DEPARTMENT	:	AGRICULTURE/EXTENSION
MALAWI DEVELOPMENT ESTIMATES, 1969	:	HEAD 77 ITEM 37
BRITISH AIDED PROJECT NO.	:	NEW PROJECT
RELATED PROJECTS	:	Kasungu Flue Cured Tobacco Growers' Scheme Namitete Burley Tobacco Scheme

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings*	-	19,050	21,550	1,400	42,000
6 Plant and Vehicles	-	5,050	1,100	-	6,150
8 Personal Emoluments	2,063	14,698	23,017	27,066	64,781
9 Running Expenses	730	6,870	8,000	8,690	23,560
TOTAL	2,793	45,668	53,667	37,156	136,491
*21 Houses	-	18,050	20,550	1,400	40,000
22 Offices	-	1,000	1,000	-	2,000

(b) Non-British, Non-Malawi Expenditure

Nil

(c) Previous Expenditure

Nil

(d) Source of Finance

Proposed for U.K. Development Loan.

2. PROJECT TARGET

(a) to alter the cultural methods for Western tobacco in order to produce a lighter leaf which is more acceptable on the world market;

(b) to provide extension support for the expansion of flue cured tobacco growing so as to ensure that Malawi obtains a firm position in the world market;

(c) to provide extension support for burley tobacco growers to assist them in altering the type of tobacco produced to meet increasing demand for types not largely produced at the moment.

Expected Completion Date

Continuing project. To be transferred to Revenue Account as soon as possible.

3. BACKGROUND INFORMATION

In recent years tobacco production has fluctuated widely. There was over production in 1967 of the Western tobaccos which threatened to ruin the market for Malawi tobacco. This was controlled in 1968 by the imposition of a quota, but production in 1969 has fallen far short of market requirements.

There is room on the market for 10,000,000 lbs. flue cured, 14,000,000 lbs. burley, 23-24,000,000 lbs. fire cured and 4-5,000,000 lbs. sun/air cured tobacco per year. It is the policy of the Government to expand production to reach these figures within the shortest possible time while minimizing swings between over - and under-production. Inputs required for tobacco production are relatively cheap compared to inputs for say cotton. Therefore no major problems are expected in this programme.

The quality of Western tobacco has tended to be poor. It is hoped that this project will help improve the quality of the leaf and therefore the cash returns to the grower.

4. PROPOSED WORK 1970/73

The project is intended to provide for increased supervisory and demonstrator staff in tobacco growing areas mainly in the Central and Southern Regions. The project will cover all areas outside the major Project Areas. Housing will be required for all project staff and offices for some of the more senior ones. Two landrovers will be required in 1970/71 and one in 1971/72. In addition, 19 motor cycles will be required in 1970/71. An element for training costs has been included.

5. JUSTIFICATION FOR PROPOSED WORK

A good demand exists for Malawi tobacco on the world market. Unless this demand is satisfied consistently, the buyers may look elsewhere to meet their requirements and Malawi will have lost valuable foreign exchange. This project is designed to guarantee that at least this minimum market requirement will be met all the time.

6. EXECUTION AND SUPERVISION

The project will be executed by the Extension Branch of the Ministry of Agriculture. In the regions the programme will be under the control of Tobacco Extension Officers. Specialist Technical Officers will supervise the programme on each type of tobacco. These specialists T.O.s will, however, work directly under the control of Divisional Officers. Development Assistants will work under Area Supervisors.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : TOBACCO DEVELOPMENT

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/EXTENSION

MALAWI DEVELOPMENT ESTIMATES, 1969 : HEAD 77 ITEM 37

BRITISH AIDED PROJECT NO. : NEW PROJECT

1. PROJECT OFFICER : The Chief Agricultural Extension Officer through the Crop Development Officer and the Tobacco Extension Officers in the Southern and Central Regions

2. FINANCIAL DETAILS

(a) Details of Expenditure

	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings						
Housing - CH and DH(W)	(1)	-	13,200	19,200	-	32,400
- Traditional (@ £50) (M)	(1)	-	4,850	1,350	1,400	7,600
Offices (M)	(2)	-	1,000	1,000	-	2,000
		-	19,050	21,550	1,400	42,000
6 Plant and Vehicles						
Landrovers	(3)	-	2,200	1,100	-	3,300
Motor Cycles	(4)	-	2,850	-	-	2,850
		-	5,050	1,100	-	6,150
8 Personal Emoluments						
Tobacco Extension Officers	(5)	-	4,530	8,432	8,639	21,601
Development Assistants	(6)	2,063	9,768	13,985	17,827	41,580
Drivers	(7)	-	400	600	600	1,600
		2,063	14,698	23,017	27,066	64,781
9 Running Expenses						
Spare Parts	(8)	-	100	20	20	140
M. & R.E.	(9)	-	1,470	1,920	1,920	5,310
Maintenance of Traditional Houses	(10)	-	-	970	1,240	2,210
Incidental Expenses & Transport & Travelling	(11)	730	5,300	5,090	5,510	15,900
		730	6,870	8,000	8,690	23,560
TOTAL		2,793	45,668	53,667	37,156	136,491

(M) = As costed by Ministry of Agriculture for construction by Ministry of Agriculture.

(W) = As costed by Ministry of Works and Supplies for construction by Ministry of Works and Supplies.

(b) Notes on Expenditure

(1) Housing: for Development Assistants; 97 traditional houses in 1970/71, 27 in 1971/72 and 28 in 1972/73 all at £M50 each; for T.O.s: 4 DH.6 houses in 1970/71 and 4 in 1971/72 at £M3,300 each; and for Senior Tobacco Extension Officer (S9); 1 CH.11 house at £M6,000 in 1971/72.

(2) Offices: Office required in 1970/71 for one of the T.O.s and in 1971/72 for the Senior Tobacco Extension Officer.

(3) Landrovers: 2 x 109" LWB Landrovers required in 1970/71 for the two Regional Tobacco Extension Officers and 1 x 109" LWB L/R in 1971/72 for the Senior Tobacco Extension Officer.

(4) Motor Cycles: for junior supervisory staff (Area Supervisors and Specialists T.O.s.), 19 cycles at £M150 each are required in 1970/71.

(5) Tobacco Extension Officers: existing officers are a C.T.O. in the Southern Region and a P.O. in the Central Region and these deal entirely with tobacco extension. In addition to these, 8 T.O.s. (4 in 1970/71 and 4 in 1971/72) will be required, each to take up responsibilities in a specific type of tobacco and as the programme expands, a senior officer, will be required (in 1971/72) to take charge of the whole project.

(6) Development Assistants: paid at the rate of £M70 per annum during a 6 month training period, and at rates in the £M103-£M149 range on successful completion of the course, depending on academic qualifications, plus an annual cost of living allowance of £M8. 97 will be taken on in the first year, and an additional 27 in the second and 28 in the third.

(7) Drivers: are required for landrovers, 2 in the first year and 1 more in the second. These are paid at hourly rates and their earnings average £M200 per annum.

(8) Spare Parts: for motor cycles to be ordered with the machines. Experience in other projects has shown that lack of spare parts can lay off a machine for months. £M100 worth of spares will be required in the first year. Thereafter £M20 annually should be sufficient to replenish the stock.

(9) M. & R.E. broken down as follows:

	1970/71	1971/72	1972/73
L/R at £M450 each	900	1,350	1,350
Motor Cycles @ £M30 each	570	570	570
	1,470	1,920	1,920

(10) Maintenance of Traditional Houses: Estimated at £M970 in 1971/72 and at £M1,240 in 1972/73.

(11) Incidential Expenses and T. & T.

Training costs for Development Assistants and transport and travelling allowances for project personnel and purchase of stationery and materials.

(c) Import Content

See separate schedule for Ministry of Agriculture.

(d) Breakdown of Expenditure by Region:

	Jan-Mar 1970		1970/71		1971/72			1972/73		
	S	C	S	C	S	C	HQ	S	C	HQ
Buildings	-	-	5750	13300	8300	13250	-	700	700	-
Plant and Vehicles	-	-	2150	2900	-	-	1100	-	-	-
Personal Emoluments	1328	735	8608	6090	10209	10698	2110	10675	14291	2100
Running Expenses	487	243	4530	2340	3755	3745	500	3516	4674	500
TOTAL	1815	978	21038	24630	22264	27693	3710	14891	19665	2600

3. LOCATION OF CONSTRUCTION

Southern and Central Region outside Major Project areas.

1 x CH 11 in 1971/72 - Lilongwe

4 x DH 6 in 1970/71 - Namweras, Kasungu, Sharpevale and Lilongwe Town.

4 x DH 6 in 1971/72 - Not yet sited.

Traditional Houses to be built by Ministry of Agriculture.

1970/71 DEVELOPMENT ESTIMATES

PROJECT SUBMISSION

PROJECT TITLE: BRITISH IRRIGATED RICE PROJECT - PHASE II

RESPONSIBLE MINISTRY/DEPARTMENT: AGRICULTURE/TECHNICAL SERVICES

MALAWI DEVELOPMENT ESTIMATES, 1969: HEAD 77 ITEM 38

BRITISH AIDED PROJECT NO.: NEW PROJECT

RELATED PROJECTS: Agricultural Research Development
Irrigation Branch
Application for personnel, equipment, construction and housing under British Technical Assistance.

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan/Mar 1970	1970/71	1971/72	1972/73	Total 3 years
(6) Plant and Vehicles	-	5,101	-	-	5,100
(8) Personal Emoluments	358	5,760	8,600	8,930	23,290
(9) Running Expenses	200	6,500	8,500	8,500	23,500
TOTAL	558	17,361	17,100	17,430	51,890

(b) Non-British, Non-Malawi Expenditure

None expected.

(c) Previous Expenditure

Nil

(d) Source of Finance

Proposed for U.K. Development Loan.

2. PROJECT TARGET

To obtain the necessary agronomic, soil and hydrological data for the preparation of a detailed feasibility study and project submission suitable for attracting finance from major donors for the establishment of a large scale irrigated rice scheme in the deltas of the Dwangwa, Dwambazi and Bua Rivers in the Nkhotakota District of the Central Region.

Expected Completion Date: Report to be submitted by mid-1972 unless a further extension of time is arranged with the U.K. Government.

3. BACKGROUND INFORMATION

As a result of the Report of the British Rice Mission to Malawi (October-November 1968) presented in February 1969, technical assistance from the British Government has been forthcoming in the form of a topographical and soil survey of the Dwangwa delta (Nkhota Kota) which was carried out during 1969. The object of Phase I was to make a survey of the area in sufficient detail to ensure that sufficient utilisable soils existed for a major project of around 20,000 acres and to pick out a suitable site for a 200 acre pilot experimental station and settlement area for irrigated rice production. The pilot settlements will range from 4 acre smallholdings to a 75-100 acre mechanised unit. An automatic river gauging station has been established on the Dwangwa River since November 1969.

The results of Phase I are being studied in the U.K. Initial appreciation is encouraging and it is expected that a decision will be reached to implement Phase II and establish the experimental farms. This should lead to Phase III in two years time, the production of a detailed feasibility study and project submission for a 10,000 to 20,000 acre development of irrigated rice and other crops in the Dwangwa/Dwambazi/Bua deltas. Phase III is expected to be carried out by consultants commissioned by the U.K. government, subject to satisfactory progress on Stage II.

The project as designed by the British Rice Mission was a comprehensive one involving:

(a) topographical, soil and hydrological studies;

(b) the setting up of a pilot farm and experimental station;

(c) agronomic studies on the pilot farm;

(d) a comprehensive evaluation and feasibility study over the whole zone involving 20,000 acres plus.

Such items as can be, have been requested under S.C.A.A.P. (personnel, equipment, construction and housing). Local counterpart staff and running expenses are here sought under this project, from the U.K./Malawi Development Loan. For completeness, a summary of the S.C.A.A.P. applications is attached. A further application for S.C.A.A.P. assistance with the feasibility study will be made in 1971/72.

PROPOSED WORK 1970/73

A site for houses and offices is being selected at Dwangwa, and arrangements will be made to commence building by Ministry of Works in April, 1970 when funds should be available. A site for a temporary camp prior to completion of construction will also be selected, and a rest house and some junior staff houses will be erected in early 1970 if funds are available under a U.K. Grant.

The Malawi Irrigation Branch is carrying out designs for the establishment of the necessary works for the pilot farm. These will be ready for implementation by April 1970, if finance is available and the engineer requested under the S.C.A.A.P. application posted to site.

Irrigation works associated with the 200 acre pilot farm will be constructed, and fields prepared for planting in November 1970. All aspects of the work carried out will be fully recorded so as to support the final feasibility study.

Staff: Senior Agronomist and Engineer should be on site in April 1970.
Soil Physicist by June 1970.
Agricultural Engineer and Second Agronomist by September 1970.
Counterpart staff will be posted in August.

(Note: Bad roads due to the wet season are likely to preclude much construction work until April 1970).

5. JUSTIFICATION FOR PROPOSED WORK

Without further investigation of soils, hydrology and agronomy, no major project can be planned.

6. EXECUTION AND SUPERVISION

The work will be executed by a team of specialists provided under S.C.A.A.P., whose leader, the Senior Agronomist, will be responsible to the Secretary for Agriculture. This team will be supported by locally based staff. Close liaison will be maintained with the relevant branches of the Ministry, and a government officer will be appointed as co-manager. This officer is likely to be an engineer during 1970, but an agronomist from 1971-2.

BRITISH IRRIGATED RICE PROJECT - PHASE II

SUMMARY OF EXPENDITURE

Source of Finance	Details	T.E.C.	Jan-Mar 1970	1970/71	1971/72	1972/73
PART I						
SCAAP Technical Assistance		£68,750				
PERSONNEL	1 Project Manager	-		3,750	5,000	5,000
	1 Irrigation/Rice Agronomist	-		3,750	5,000	5,000
	1 Soil Physicist/ Chemist	-		3,750	5,000	5,000
	1 Irrigation Engineer	-		3,750	5,000	5,000
	1 Agricultural Engineer	-		3,750	5,000	5,000
	TOTAL	-		18,750	25,000	25,000
PART II						
SCAAP Technical Assistance		£54,000				
EQUIPMENT AND CONSTRUCTION						
	Equipment for Rice Agronomist	-		1,000	-	-
	Equipment for Soil Laboratory	-		3,000	2,000	-
	Farm Machinery and Equipment	-		5,000	2,500	-
	Pump with Installation Cost	-		2,500	-	-
	Land Survey, Canals & Ditches	-		35,000	-	-
	Protective Embankment	-		2,000	-	-
	Access Road	-		1,000	-	-
	TOTAL	-		49,500	4,500	-
PART III						
SCAAP Technical Assistance		£81,000				
SMALL CAPITAL GRANT FOR BUILDINGS						
	(a) 1 CL 7 house @ £6,200	-		6,200	-	-
	5 CL 6 houses @ £5,500	-		17,500	10,000	-
	6 DL 2 houses @ £3,300	-		19,800	-	-
	21 PL 1 houses @ £ 730	-		15,330	-	-
	(b) Offices, Stores and Workshop and Field Laboratory @ approx 36/- per sq. ft.	-		12,170	-	-
	TOTAL	-		71,000	10,000	-

Summary of Expenditure - Cont'd

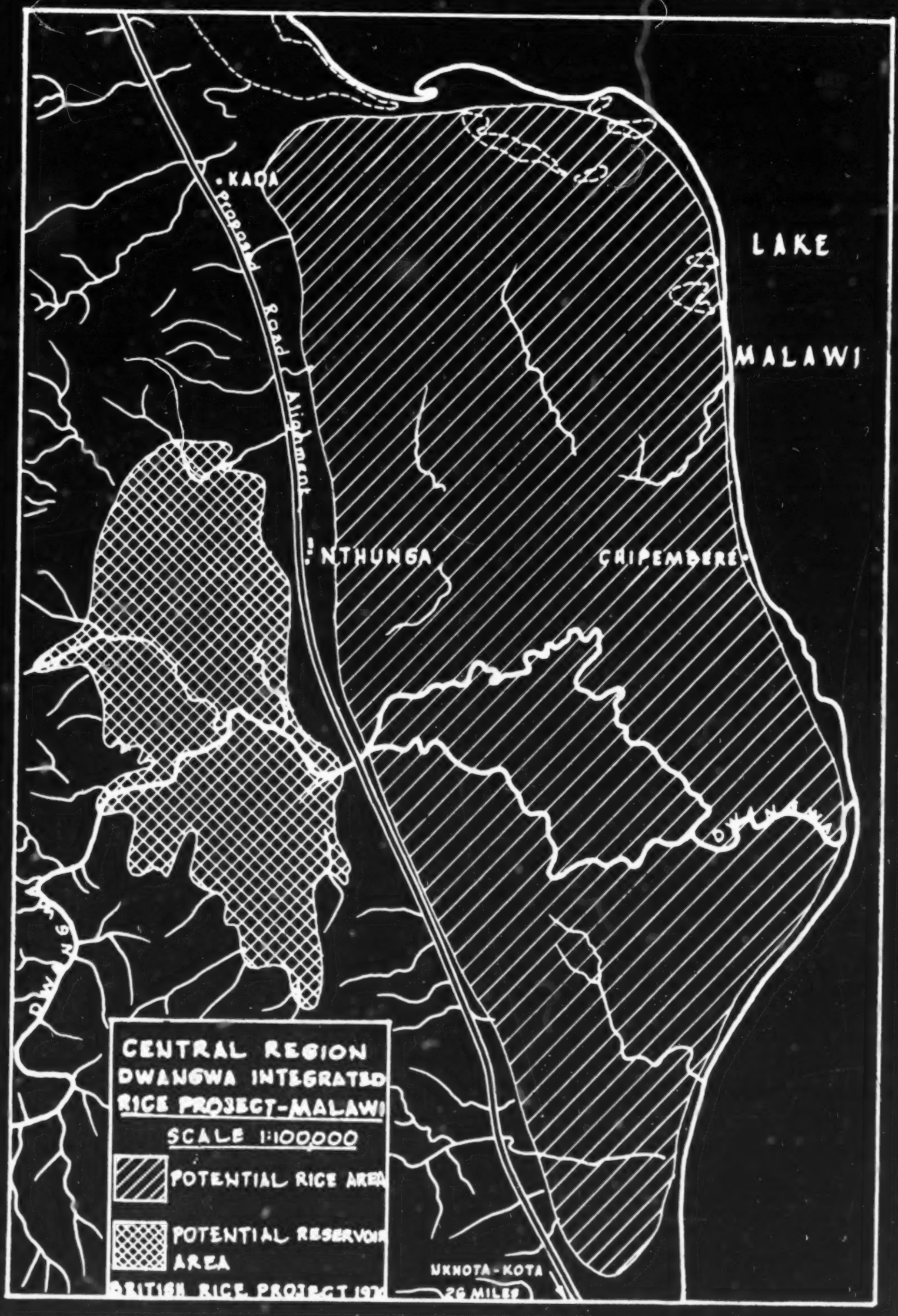
Source of Finance	Details	T.E.C.	Jan-Mar 1970	1970/71	1971/72	1972/73
PART IV - U.K. DEVELOPMENT LOAN (HEAD 77 ITEM 21)		£52,449				
Recurrent Costs (Supporting Local Staff & Facilities)	5 Landrovers	1		5,100	-	-
	1 Agronomist(P.O.)	-		748	790	832
	1 Farm Manager (T.O.)	118		462	488	509
	2-3 Technical Officers	-		860	1,290	1,370
	2-3 Laboratory Assistants	-		447	618	662
	5-10 Field Assistants	40		745	1,545	1,655
	2-3 Clerical Officers	-		298	469	502
	7 Drivers	100		700	1,400	1,400
	Labour	100		1,500	2,000	2,000
	Transport and Travelling	100		1,000	1,500	1,500
	M. and R.E.	100		4,000	5,000	5,000
	Equipment and Materials	-		1,500	2,000	2,000
	TOTAL	559		17,360	17,100	17,430

NOTE

Head 77 Item 40 of the Malawi Government Development Estimates shows £109,000 for Technical Assistance in 1970/71 made up as follows :-

PART II (EQUIPMENT AND CONSTRUCTION)	
Land Survey, Canals and Ditches	£35,000
Protective Embankment	£ 2,000
Access Roads	£ 1,000
	£38,000
PART III (SMALL CAPITAL GRANT FOR BUILDINGS)	
Houses	£58,830
Offices, Stores and Workshop etc.	£12,170
	£71,000

DWANGWA INTEGRATED RICE PROJECT



1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : BRITISH IRRIGATED RICE PROJECT - PHASE I

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/TECHNICAL SERVICES

MALAWI DEVELOPMENT ESTIMATES, 1969 : HEAD 77 ITEM 38

BRITISH AIDED PROJECT NO. : NEW PROJECT

1. PROJECT OFFICER : Senior Agronomist of S.C.A.A.P. Team

2. FINANCIAL DETAILS

(a) Details of Expenditure	Notes	Jan/Mar 1970	1970/1	1971/2	1972/3	TOTAL 3 Years
6 Plant and Vehicles						
5 Landrovers	(1)	1	5,100	-	-	5,100
8 Personal Emoluments						
1 Agronomist A2	(2)	-	748	790	832	2,370
1 Farm Manager B3	(3)	118	462	488	509	1,459
2/3 Technical Officers B3	(4)	-	860	1,290	1,370	3,520
2/4 Laboratory Assistants C2	(5)	-	447	618	662	1,727
5/10 Field Assistants C2	(6)	40	745	1,545	1,655	3,945
2/3 Clerical Officers	(7)	-	298	469	502	1,269
Drivers @ £200 p.a.		100	700	1,400	1,400	3,500
Labour	(8)	100	1,500	2,000	2,000	5,500
		358	5,760	8,600	8,930	23,290
9 Running Expenses						
Transport & Travelling	(9)	100	1,000	1,500	1,500	4,000
M. and R.E.	(10)	100	4,000	5,000	5,000	14,000
Equipment and Travelling	(11)	-	1,500	2,000	2,000	5,500
		200	6,500	8,500	8,500	23,500
TOTAL		559	17,360	17,100	17,430	51,890

(b) Notes on Expenditure

(1) The Landrovers consisting of 1 x 7 seater and 4 x pickups will be used for duty travelling including one for the Soil Physicist/Chemist.

(2) The Malawian Agronomist (P.O.) will work as a counterpart to the Rice Agronomist who will be recruited under a S.C.A.A.P. post.

(3) The Farm Manager (T.O.), also a Malawian, will work on a 200 acre pilot experimental farm.

(4) The T.O.'s will also work as counterparts.

(5) Laboratory Assistants will be required for experimental work on soil analysis.

(6) Up to 10 Field Assistants will be required.

(7) C.O.'s will be required for general office duties.

(8) Labourers will initially be employed on the scheme and some of them may eventually be selected as settlers.

(9) Subsistence and travelling allowances while on duty.

(10) Maintenance and repair expenditure of Motor Vehicles and irrigation equipment.

(11) Minor tools and equipment required for irrigation.

(c) Import Content.

See separate schedule for Agriculture.

(d) Breakdown of Expenditure by Region.

All expenditure will be in the Central Region.

LOCATION OF CONSTRUCTION

Nil.

ECONOMIC APPRAISAL

A cost/benefit analysis will be constructed from the information gathered from the present phase of development if the results obtained from this pilot scheme are encouraging enough to necessitate the establishment of a large scale irrigated rice scheme.

1970/71 DEVELOPMENT ESTIMATES
PROJECT SUBMISSION

PROJECT TITLE : MALAWI YOUNG PIONEERS SETTLEMENT SCHEMES

RESPONSIBLE MINISTRY/DEPARTMENT : PRESIDENT'S OFFICE/HEADQUARTERS

MALAWI DEVELOPMENT ESTIMATES, 1969 : NEW PROJECT

BRITISH AIDED PROJECT NO. : NEW PROJECT

RELATED PROJECTS : Settlement Branch

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan/Mar. 1970	1970/71	1971/72	1972/73	TOTAL 3 Years
7 Other Equipment	-	3,500	3,500	3,500	10,500
8 Personal Emoluments	-	400	400	400	1,200
9 Running Expenses	-	37,450	37,450	37,450	112,350
TOTAL	-	41,350	41,350	41,350	124,350

(b) Non-British, Non-Malawi Expenditure

Not expected.

(c) Previous Expenditure

Nil.

(d) Source of Finance

Proposed for U.K. Development Loan.

2. PROJECT TARGET

(a) To feed, clothe, provide blankets and cooking and eating utensils for 700 Malawi Young Pioneers and their families a year on settlement schemes.

(b) To feed and transport food to approximately 175 Young Pioneers settled in the previous year on schemes in which clearing of dense bush prevents the settler growing adequate food in his first year.

Expected Completion Date

Continuing project.

3. BACKGROUND INFORMATION

As part of the Government's Agricultural Development Programme it has been decided to expand the present Settlement Branch project, and this project may be considered as complementary to the main project.

4. PROPOSED WORK 1970/73

To establish 700 Pioneers a year on the land and to support them in their first year, and in certain cases a second year, until they can harvest their first crop.

5. JUSTIFICATION FOR PROPOSED WORK

Considerable emphasis is placed by the Government on the part that young people can play in national development. This project is intended to enlist young people in demonstrating improved agricultural methods by participating in organised cash crop farming. The settlement schemes will themselves produce surplus crops for export, thereby contributing to the prosperity of the nation, and will also provide an example of cash crop orientated farming to the surrounding traditional subsistence farming areas to encourage them to follow improved farming methods and increase their incomes.

The Pioneer farmers are young, have no reserves of their own, and require assistance during their first year of settlement to enable them to become established and to concentrate on the development of their holdings.

This project, along with food assistance from the World Food Programme, provides the basic necessities prior to the first harvest.

EXECUTION AND SUPERVISION

The project will be executed and supervised by the Officer in Charge, Southern Region Headquarters, Malawi Young Pioneers, who is directly responsible to the National Adviser, Malawi Young Pioneers.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : MALAWI YOUNG PIONEERS SETTLEMENT SCHEMES

RESPONSIBLE MINISTRY/DEPARTMENT : PRESIDENT'S OFFICE/HEADQUARTERS

MALAWI DEVELOPMENT ESTIMATES, 1969 : NEW PROJECT

BRITISH AIDED PROJECT NO. : NEW PROJECT

1. PROJECT OFFICER : Administrative Officer, Office of the President and Cabinet, through the National Adviser, Malawi Young Pioneers.

2. FINANCIAL DETAILS

(a) Details of Expenditure

	Notes	Jan/Mar. 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs
7 Other Equipment						
Working clothes	(1)	-	700	700	700	2,100
Domestic Equipment	(2)	-	2,800	2,800	2,800	8,400
		-	3,500	3,500	3,500	10,500
8 Personal Emoluments						
Leaders	(3)	-	400	400	400	1,200
9 Running Expenses						
Purchase of food	(4)	-	28,875	28,875	28,875	86,626
Transport of settlers	(5)	-	4,200	4,200	4,200	12,600
Transport of food	(6)	-	4,375	4,375	4,375	13,125
TOTAL		-	41,350	41,350	41,350	124,050

Revenue

Revenue will accrue to this project by way of development charges payable by the Malawi Young Pioneer settlers. The charge is at present £40 repayable over five years at 5% interest, giving one instalment of £3, one of £8 and three of £12.

This £40 comprises the £29 set out in the Settlement Branch Project, and £11 in this project for working clothes (£1), domestic equipment (£4), and transport of the settler and (£6) family.

(b) Notes on Expenditure

(1) The provision of working clothes at £1 per settler.

(2) The provision of necessary domestic equipment at £4 per settler.

(3) 4 leaders on new schemes at £100 per annum to assist the agricultural staff with the administration of food supplies.

(4) The provision of maize for the settlers at 15½ bags per family per year at £2 per bag. The numbers of settlers being fed is 700 per annum, plus a 25% carry over who cannot become self supporting in their first year, due to difficulties over the clearing of land.

(5) For the transport of the settlers and their families from their villages or training bases to settlement schemes, at £6 per family.

(6) Transport of food from available sources to settlement schemes, at £5 per family per annum.

(c) Import Content

Domestic Equipment @ 25% = £ 700
Transport @ 80% = £6,860.

(d) Breakdown of Expenditure by Region

	1970/71			1971/72			1972/73		
	S	C	N	S	C	N	S	C	N
7. Other Equipment	800	1350	1350	800	1350	1350	800	1350	1350
8. Personal Emoluments	80	160	160	80	160	160	80	160	160
9. Running Expenses	10000	12450	13000	10000	12450	13000	10000	12450	13000
	10800	13960	14510	10880	13960	14510	10880	13960	14510

LOCATION OF CONSTRUCTION

Not applicable.

1970/71 DEVELOPMENT ESTIMATES
PROJECT SUBMISSION

PROJECT TITLE	:	DAMBO UTILISATION PROJECT
RESPONSIBLE MINISTRY/DEPARTMENT	:	AGRICULTURE/TECHNICAL SERVICES
MALAWI DEVELOPMENT ESTIMATES, 1969	:	NEW PROJECT
BRITISH AIDED PROJECT NO.	:	NEW PROJECT
RELATED PROJECTS	:	Land Use Services Animal Husbandry.

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan-Mar 1970	1970/1	1971/72	1972/3	Total 3 Yrs.
2 Buildings	-	-	3,200	3,600	6,800
6 Plant and Vehicles	-	-	2,100	700	2,800
7 Other Equipment	-	-	7,600	10,700	18,300
8 Personal Emoluments	-	989	3,600	8,600	13,189
9 Running Expenses	-	450	1,800	3,220	5,470
TOTAL	-	1,439	18,300	26,820	46,559
21 Houses		-	3,200	3,600	6,800
22 Other Buildings		-	-	-	-

(b) Non-British, Non-Malawi Expenditure

None expected

(c) Previous Expenditure

Nil

(d) Source of Finance

Proposed for U.K. Development Loan.

2. PROJECT TARGET

The project aims to plan and carry out a rational land use scheme to make the maximum use of valuable dambo grazing land and so prevent its deterioration through overstocking.

At the same time it will provide a plan for the integration of arable cropping and animal husbandry.

Expected Completion Date:

The future of the project will depend on the results obtained.

3. BACKGROUND INFORMATION

"Dambo" (marsh grasslands - Seasonal Swamps) occupy over 20% of the agricultural land of Malawi. They are the Traditional grazing areas throughout the country, and with the increase of population and growth of numbers of stock they have in many instances become over grazed and eroded.

A land use plan to overcome this problem has been prepared, and it is proposed to implement this plan in the upper catchment of the South Rukuru river in Mzimba District. This has a total area of some 2,000 Square miles and is agriculturally the most productive

(b) Notes on Expenditure

(1) Housing for Junior Technical Officers at approx. £1,200 each.

(2) Housing for Technical Assistants grade at approx. £500 each.

(3) Mobile housing for labourers temporary field accommodation and storage of materials.

(4) One tractor and plough available already from other funds, but would require a second before April 1971.

(5) Trailers required for all tractors for transport of fencing materials.

(6) Carts for lending to local self-help groups.

(7) Barbed wire, nails, staples, strainers, droppers etc. at £50 per mile excluding posts.

(8) One Technical Officer I, one Technical Officer II.

(9) Two Technical Assistants.

(10) 14 Development Assistants

(11) Labour for conservation roads, etc.

(12) Cement and culvert rings for unavoidable dambo crossings on access routes.

(c) Import Content

See separate schedule for Ministry of Agriculture.

(d) Breakdown of Expenditure by Region

All expenditure will be in the Northern Region in which the scheme is situated.

LOCATION OF CONSTRUCTION

1970/71	:	Nil
1971/72	:	1 EH house, 3 PH houses at or near Mjinge Village, Mzimba District.
1972/73	:	Further housing.

1970/71 DEVELOPMENT ESTIMATES
PROJECT SUBMISSION

PROJECT TITLE : AGRICULTURAL RESEARCH COUNCIL

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/RESEARCH

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 66

BRITISH AIDED PROJECT NO. : NEW PROJECT

RELATED PROJECTS : Agricultural Research Development
Multi-Country Grain Legume Project

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
10 Special Expenditure	-	19,500	-	-	19,500
TOTAL	-	19,500	-	-	19,500

(b) Non-British, Non-Malawi Expenditure

£1,400 for 'Conola' Calculator and Research Microscope.

(c) Previous Expenditure

	£	Cumulative Total
To 31/12/68	24,400	24,400
1969 Printed Estimates (incl.1968 c/f)	2,000	
1969 Revised Estimates (incl.1968 c/f)	2,000	
1969 Estimated Carry-forward	-	

(d) Source of Finance

Proposed for U.K. Development Loan.

2. PROJECT TARGET

(a) To complete the establishment of the facilities planned for the Cotton Pest Research and Timber Testing Units proposed under the initial joint U.K./Malawi agreement to set up the Agricultural Research Council of Malawi.

(b) To establish the Council's Biometrician in Malawi instead of Rhodesia.

(c) To provide staff housing for an expansion of the Grain Legume Unit to meet the needs of the proposed Multi-Country Grain Legume Project (a programme of legume improvement covering Botswana, Lesotho and Swaziland as well as Malawi).

Expected Completion Date: 31st December 1970 for the existing phase.

3. BACKGROUND INFORMATION

In 1967 the U.K. and Malawi Governments agreed to set up and finance an Agricultural Research Council of Malawi with the following Units :-

a) A Headquarters and Cotton Pest Research Unit at Makoka, Zomba District.

b) A Grain Legume Unit at Chitedze, Lilongwe District (already established).

c) A Tree Breeding and Timber Testing Unit at Chongoni, Dedza District.

d) A Soil Physics Unit at Swazi, Mlanje District.

e) A Biometrics Unit in Salisbury, Rhodesia or at some other suitable site.

To this end capital grants of £132,000 were pledged, 80% coming from the U.K. and 20% from the Malawi Government.

Running costs were to be shared in the proportion of 57% from the U.K. and 43% from the Malawi Government of agreed sums over a 3 year rolling period.

Shortly after the capital estimates had been made and agreed the £ was devalued, and largely as a result of this the estimates have proved to be too conservative, and facilities have had to be either eliminated or curtailed. Extra junior staff housing at Makoka and junior staff housing and a resthouse at Chongoni are thus requested from British Loan Funds since the capital grant has not sufficed.

Also as a result of U.D.I. it has proved impracticable to set up a Biometrics Unit in Salisbury and it is now proposed to establish it in Malawi as computer facilities in Blantyre and Zomba are improving. Computer services in the U.K. will be used during an interim period. A house and a desk calculator is therefore requested for the Biometrician at Makoka.

Finally in order to expand the practical application of the good work being done by the Grain Legume Unit at Chitedze, a Multi-Country Grain Legume Research Project has been proposed by UNDP, the senior staff and senior staff housing, equipment and expenses being provided by UNDP, the offices and laboratories by a bilateral donor, and the junior support staff and its housing by the recipient countries. In the case of Malawi this means the A.R.C., and so funds for the junior staff housing required are here requested. Finance for replacement vehicles and a research microscope are also included.

As the A.R.C. is at present financed jointly by the U.K. and Malawi, the extra capital needed for completion is sought from the U.K./Malawi Loan.

4. PROPOSED WORK 1970/73

The present phase provides for the construction of buildings already detailed. It is possible that future development will require further capital investment.

5. JUSTIFICATION FOR PROPOSED WORK

To complete the establishment of the A.R.C. of Malawi in the form originally agreed, and to expand the practical application of one of its most successful research teams.

6. EXECUTION AND SUPERVISION

The work will be carried out under the overall supervision of the Director of the Agricultural Research Council of Malawi.

The work at Makoka will be done by the Council's own Consultants and contractors. That at Chongoni will be done by the Forestry Department. That at Chitedze will be done by the Ministry of Works and Supplies or its contractors.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : AGRICULTURAL RESEARCH COUNCIL - CAPITAL

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/RESEARCH

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 66

BRITISH AIDED PROJECT NO. : NEW PROJECT

1. PROJECT OFFICER

The Chief Agricultural Research Officer, Ministry of Agriculture through the Director of the Agricultural Research Council of Malawi.

2. FINANCIAL DETAILS

(a) Details of Expenditure

	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
10 Special Expenditure						
At Makoka Research Station - Cotton Pest Research and Biometrics						
1 CH grade house for the Biometrician at Makoka(C)	(1)	-	6,500	-	-	6,500
Addition of two offices and insecticide preparation room to existing buildings (C)	(2)	-	1,080	-	-	1,080
Renovation of Junior Staff houses (C)	(3)	-	500	-	-	500
Improved water supply (W)	(4)	-	1,700	-	-	1,700
Personnel carrier 9-12 seater (C)	(5)	-	1,220	-	-	1,220
Calculating machine for Biometrician (C)	(6)	-	700	-	-	700
Total Makoka		-	11,700	-	-	11,700
At Chitedze - Grain Legume Unit						
Seed store (W)	(2)	-	750	-	-	750
Landrover (C)		-	1,100	-	-	1,100
Research Microscope (C)		-	700	-	-	700
2 EH and 2 PH houses for support staff to the Grain Legume Team (W)	(7)	-	4,250	-	-	4,250
Total Chitedze		-	6,800	-	-	6,800
At Chongoni - Forest Research Institute						
2 Junior staff quarters (M)	(2)	-	1,000	-	-	1,000
TOTAL		-	19,500	-	-	19,500

(C) = Capital grant to A.R.C. for construction by their own architects and contractors or for direct purchase by them.

(W) = Costed for construction by Ministry of Works and Supplies by direct labour

(M) = Costed for construction by Forestry Department building team.

(b) Notes on Expenditure

(1) Under the original proposals the Biometrician was to have been stationed in Salisbury. As things stand it is considered preferable that he be stationed in Malawi at Makoka, the Council's Headquarters.

(2) These items are to complete the original programme, having been left unbuilt to date due to the rising costs of building.

(3) Renovation of old Estate housing will provide some temporary accommodation for Government field staff undertaking short courses of training in 'scouting' and cotton pest control techniques.

(4) The water supply for Makoka was designed for a much smaller station and the pumping equipment and the storage system need to be improved. The Ministry of Works estimate for this work is £1,700.

(5) Owing to a shortage of housing at Makoka trainees have to be transported from Zomba or Blantyre for their courses. The normal bus services have not proved adequate and a small personnel carrier is requested, of a design that can be converted by addition or removal of seats either to carry parties of visitors on field days, or to carry light goods from Blantyre as necessary.

(6) The Biometrician will increasingly take on routine analysis not only for the A.R.C. Units but also for Government research staff. He is training two Malawians as assistant biometricians. His expected work load justifies the use of a desk top electronic calculator. The desired model for the purpose of standardisation is the non-British 'Conola 163'.

(7) These houses for Malawian support staff form part of the Multi-Country Grain Legume Research Project. As it will be part of the A.R.C.'s Grain Legume Unit at Chitedze, it is appropriate to include the cost in this project.

(c) Import Content.

See separate schedule for Ministry of Agriculture.

(d) Breakdown of Expenditure by Region

	1970/71			
	South	Centre	North	Total
Special Expenditure	11,700	7,800	nil	19,500

3. LOCATION OF CONSTRUCTION

Construction will be at the three main centres of the A.R.C. of Malawi, namely Makoka, Chongoni and Chitedze.

Makoka	-	Senior Staff House	(C)
		Water Supply	(W)
Chitedze	-	Seed Store & Housing	(W)
Chongoni	-	Junior Staff Quarters	(M)

1970/71 DEVELOPMENT ESTIMATES

PROJECT SUBMISSION

PROJECT TITLE : HYDROLOGICAL STUDIES FOR TEA IRRIGATION, CHOLO/MLANJE

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/TECHNICAL SERVICES

MALAWI DEVELOPMENT ESTIMATES 1969 : NEW PROJECT

BRITISH AIDED PROJECT NO. : NEW PROJECT

RELATED PROJECTS : Irrigation Branch
Tea Development

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
5 Other Construction	-	870	-	-	870
6 Plant and Vehicles	-	1,500	-	-	1,500
7 Other Equipment	-	2,076	-	-	2,076
8 Personal Emoluments	-	1,690	1,710	1,730	5,130
9 Running Expenses	-	1,150	650	650	2,450
TOTAL	-	7,286	2,360	2,380	12,026

(b) Non-British, Non-Malawi Expenditure

2 current meters. £660 in 1970/71.

(c) Previous Expenditure

Nil.

(d) Source of Finance

Proposed for U.K. Development Loan.

2. PROJECT TARGET

To provide sufficient hydrological data about the Cholo/Mlanje Tea Areas to enable:

a) maximum use to be made of existing run of river water supplies in granting water licences to tea estates, and

b) a detailed engineering study and cost estimate to be made of the possibilities of water storage for tea irrigation in the area.

Expected Completion Date: Continuing until a major irrigation scheme is either accepted or abandoned - say 5 years in the first instance.

3. BACKGROUND INFORMATION

The Tea Research Foundation of Central Africa has reported that marked yield increases can be gained by irrigating tea in the dry season in Cholo/Mlanje.

As a result consultancy advice has been obtained from at least four sources, Messrs. Nottidge of the World Bank Agricultural Development Service, Ferguson and Laurence of the U.K. Ministry of Overseas Development and Kayser of South African Technical Assistance. They have all been limited in their recommendations by the lack of hydrological data, and have indicated the extra information needed.

It is therefore proposed to invest in more gauging stations and personnel without further delay.

4. PROPOSED WORK 1970/73

The funds will permit the Senior Hydrologist of the Ministry of Natural Resources, with the help of the Irrigation Branch, to set up and man 8 regular (all year) gauging stations on the Namadzi, Kwakwazi, Natande, Nsikidzi, Nswadzi, Lipumulo, Khonjeni and Napemba rivers, together with 29 miscellaneous gauges to be operated for the latter part of the dry season only. These will be in addition to the existing 16 stations where measurements will be intensified.

Each river discharge will be measured once a week in the dry season and at fortnightly intervals during the rest of the year.

5. JUSTIFICATION FOR PROPOSED WORK

Without this information no conclusion can be reached on whether or not a major water storage and conservation project in the Cholo/Mlanje Tea Areas is feasible and economic.

6. EXECUTION AND SUPERVISION

The project will be carried out under the supervision of the Senior Hydrologist of the Ministry of Natural Resources, aided where necessary by members of the Irrigation Branch.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : HYDROLOGICAL STUDIES FOR TEA IRRIGATION, CHOLO/MLANJE

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/TECHNICAL SERVICES

MALAWI DEVELOPMENT ESTIMATES 1969 : NEW PROJECT

BRITISH AIDED PROJECT NO. : NEW PROJECT

1. PROJECT OFFICER

The Chief Irrigation Engineer.

2. FINANCIAL DETAILS

(a) Details of Expenditure	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
5 Other Construction (M)						
Setting up gauging stations	(1)	-	270	-	-	270
Installation of 4 Automatic Recorders		-	400	-	-	400
Improving natural controls		-	200	-	-	200
		-	870	-	-	870
6 Plant and Vehicles						
1 Landrover (LWB - 10 seater)		-	1,500	-	-	1,500
7 Other Equipment						
4 Automatic Recorders @ £330		-	1,320	-	-	1,320
8 Vee notches @ £12		-	96	-	-	96
2 Current meters @ £330		-	660	-	-	660
		-	2,076	-	-	2,076
8 Personal Emoluments	(2)					
2 Field Assistants		-	320	340	360	1,020
4 Gauging Assistants		-	340	340	340	1,020
2 Drivers		-	660	660	660	1,980
Labour		-	185	185	185	555
Gauge readers		-	185	185	185	555
		-	1,690	1,710	1,730	5,130
9 Running Expenses						
M. & R.E. and T. & T.		-	650	650	650	1,950
Contingencies		-	500	-	-	500
		-	1,150	650	650	2,450
TOTAL		-	7,286	2,360	2,380	12,026

(M) = Costed for construction by the Water Resources Division of the Ministry of Natural Resources.

1970/71	17,000			
1971/72	20,000			
1972/73	23,000			
1973/74	26,000			
1974/75	25,000			

The British Loan contribution is calculated on the basis of the subsidy on Sulphate of Ammonia, which will be the principal fertiliser. The mixtures will be non-British and will thus not qualify for loan funds.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : FERTILISER SUBSIDY

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/PLANNING UNIT

MALAWI DEVELOPMENT ESTIMATES, 1969 : HEAD 77 ITEMS 22 & 71

BRITISH AIDED PROJECT NO. : 24

1. PROJECT OFFICER

Principal Planning Officer (Ministry of Agriculture) through Farmers Marketing Board.

2. FINANCIAL DETAILS

(a) Details of Expenditure

	Notes	Jan-Mar 1970	1970/1	1971/2	1972/3	Total 3 Yrs.
10. Special Expenditure						
Fertiliser Subsidy - British Loan (1)		Nil	76,500	50,000	Nil	126,500
Fertiliser Subsidy - Local Contribution (2)		Nil	111,500	104,000	66,500	282,000
TOTAL		Nil	188,000	154,000	66,500	408,500

(b) Notes on Expenditure

(1) The British Loan element is calculated as half the subsidy on sulphate of ammonia, based on an estimated average cost at the distribution centres in Malawi of £27 per short ton. The requirements and prices to the grower proposed are:-

	1970/71	1971/2	1972/3
Requirements for Sulphate of Ammonia short tons	17,000	20,000	23,000
Price to the grower £ per ton	£18.0	£22.0	cost price
Total Subsidy - £ per ton	£ 9	£ 5	Nil
British Loan contribution - £ per ton	£ 4.5	£ 2.5	Nil

(2) The Local Contribution is calculated as half the subsidy on sulphate of ammonia as above, plus the full subsidy on the N.P. mixture based on an average cost at the distribution centres in Malawi of £35.5 per short ton of mixture.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE	:	FERTILISER SUBSIDY
RESPONSIBLE MINISTRY/DEPARTMENT	:	AGRICULTURE/PLANNING UNIT
MALAWI DEVELOPMENT ESTIMATES, 1969	:	HEAD 77 ITEMS 22 & 71
BRITISH AIDED PROJECT NO.	:	24

1. PROJECT OFFICER

Principal Planning Officer (Ministry of Agriculture) through Farmers Marketing Board.

2. FINANCIAL DETAILS

(a) Details of Expenditure

	Notes	Jan-Mar 1970	1970/1	1971/2	1972/3	Total 3 Yrs.
10. Special Expenditure						
Fertiliser Subsidy - British Loan (1)		Nil	76,500	50,000	Nil	126,500
Fertiliser Subsidy - Local Contribution (2)		Nil	111,500	104,000	66,500	282,000
TOTAL		Nil	188,000	154,000	66,500	408,500

(b) Notes on Expenditure

(1) The British Loan element is calculated as half the subsidy on sulphate of ammonia, based on an estimated average cost at the distribution centres in Malawi of £27 per short ton. The requirements and prices to the grower proposed are:-

	1970/71	1971/2	1972/3
Requirements for Sulphate of Ammonia short tons	17,000	20,000	23,000
Price to the grower £ per ton	£18.0	£22.0	cost price
Total Subsidy - £ per ton	£ 9	£ 5	Nil
British Loan contribution - £ per ton	£ 4.5	£ 2.5	Nil

(2) The Local Contribution is calculated as half the subsidy on sulphate of ammonia as above, plus the full subsidy on the N.P. mixture based on an average cost at the distribution centres in Malawi of £35.5 per short ton of mixture.

The requirements and prices to the growers proposed for mixture are:-

	1970/1	1971/2	1972/3
Requirement for mixture - short tons	2,000	3,000	5,000
Price to the grower - £ per ton mixture	£18	£22.0	£26
Malawi Government Obligations:			
Subsidy on mixture, all paid by Malawi Government - £ per ton	£17.5	£13.5	£ 9.5
Plus Malawi Government share of Subsidy on Sulphate of Ammonia - £ per ton	£ 4.5	£ 2.5	£ Nil

(c) Import Content

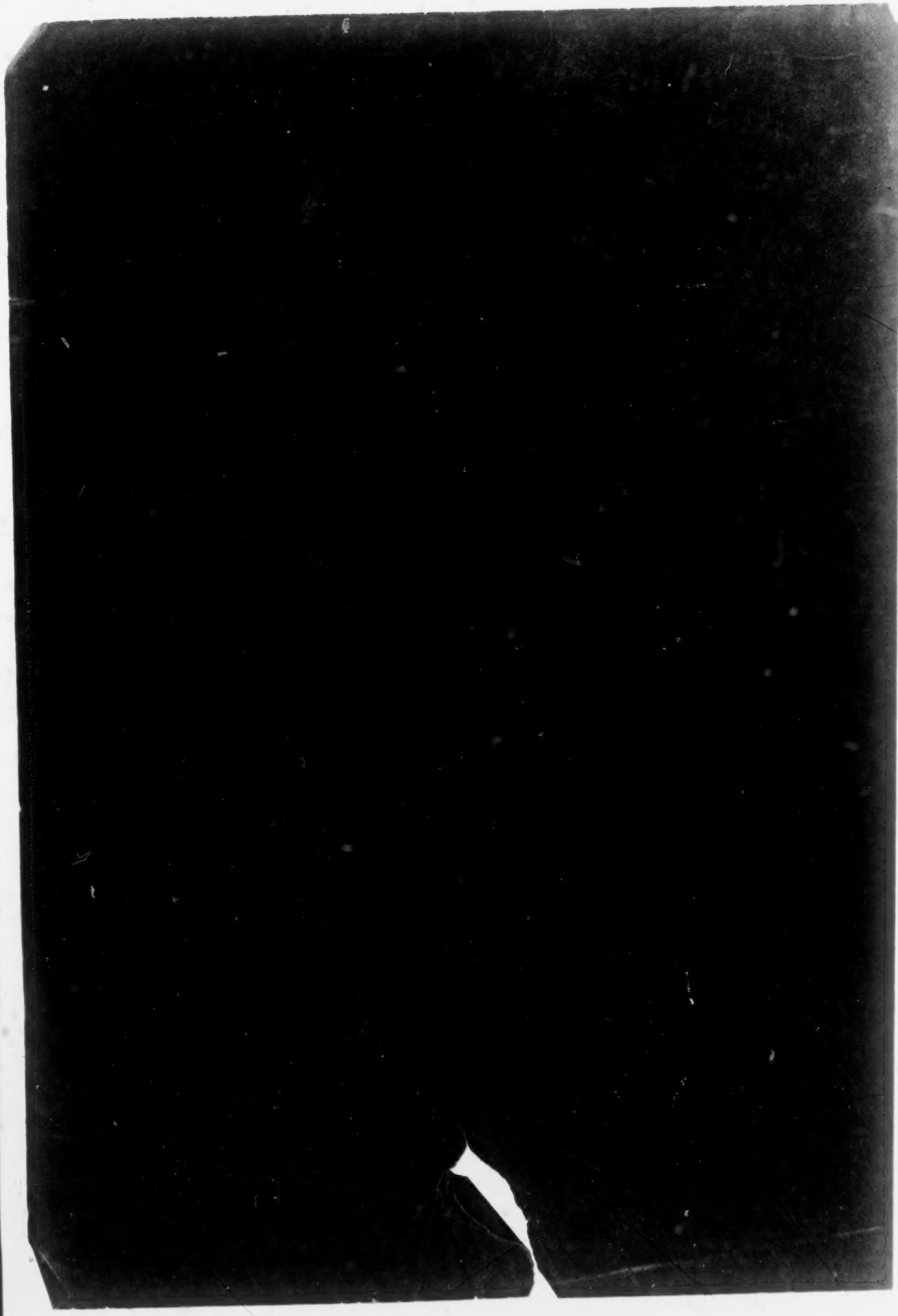
The import content of sulphate of ammonia is estimated at £22 per short ton while that of the mixture is estimated at £30 per short ton. The subsidy as such has no import content.

(d) Breakdown of Expenditure by Region

The subsidy will be paid to the F.M.R. Limbe. The percentage split of sales between regions in the 1967/68 season was 15% Northern Region, 45% Central Region and 40% Southern Region.

3. LOCATION OF CONSTRUCTION

None.



HEAD 77

AGRICULTURE

(OTHER AIDED PROJECTS)

In addition to the Loan German Technical Assistance was given up to the end of 1969 for extension staff and farmer training.

The results obtained since the beginning of the projecr are as follows :-

	1964	1965	1966	1967	1968	1969
Number of Growers	3000	6000	3690	2168	1177	3326
Total Production	78000 lbs.	215000 lbs.	200700 lbs.	128000 lbs.	99700 lbs.	197,000 lbs
Price per lb.	23d	23d	19d	20d	28d	23d

The table illustrates the variation in growers' interest, production and quality.

4. PROPOSED WORK 1970/73

It is proposed to complete in 1970/71 work which could not be carried out during 1969 i.e.

(i) to drill 7 boreholes, and

(ii) to contruct a total of 34½ miles of Roads.

This will use up the balance of the loan.

5. JUSTIFICATION FOR PROPOSED WORK

The project has not achieved its target because of fluctuations in farmers' interest due to extreme variations in yield per acre and price. In addition the future market prospects for the high quality crop which has been aimed at are uncertain. The proposed work in 1970/71 is merely to complete the programme.

6. EXECUTION AND SUPERVISION

The execution and supervision of the work will be carried out by the Ministry of Works and Supplies in the case of roads and the Ministry of Natural Resources in the case of boreholes.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : TURKISH TOBACCO DEVELOPMENT (LOAN)

RESPONSIBLE MINISTRY DEPARTMENT : AGRICULTURE/ECTENSTION

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 23

1. PROJECT OFFICER

The Chief Agricultural Extension Officer.

2. FINANCIAL DETAILS

(a) Details of Expenditure

Details of Expenditure	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
3 Water Supplies						
Boreholes (N.R.)	(1)	-	4,190	-	-	4,190
4 Roads and Bridges						
Roads and Bridges (W)	(2)	-	10,030	-	-	10,030
TOTAL		-	14,220	-	-	14,220

(N.R.) - Costed for construction by Ministry of Natural Resources.

(W) - Costed for construction by Ministry of Works and Supplies.

(b) Notes on Expenditure

(1) 7 boreholes at approximately £600 each will be constructed.

(2) Roads and Bridges:

(a) Manyamula - Mjinge (6 miles)	(1) Road	£1,500
	(2) Bridge	1,100
(b) Kamteteka - Mbuzi School (28½ miles)		7,430
		10,030

(c) Import Content

See separate schedule for Agriculture.

(d) Breakdown of Expenditure by Region

All in the Northern Region.

3. LOCATION OF CONSTRUCTION

Roads Ministry of Works and Supplies (see note (2) above)

Boreholes

Place	Site	Grid Reference
Kamteteka	Kholwani Lungu	WB 427925
"	Mungoni Wamavi Makamo	WB 482903
Mjinge	Chebeku Ngulube	WB 306654
Manyamula	Daniel Makamo	WB 479868
Zubayumo	Kamangadazi Makamo	WB 428955
Kanyanje	Thom Manda	WB 409723
"	Moses Chilenje	WB 423688
Zubayumo	Jonasi Lowore	WB 575928

Eight sites are given to include a reserve in case one proves a failure.

7

1970/71 DEVELOPMENT ESTIMATES
PROJECT SUBMISSION

PROJECT TITLE : SALIMA LAKESHORE DEVELOPMENT PROJECT (PHASE I)
(FORMERLY CENTRAL REGION LAKESHORE DEVELOPMENT)

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/MAJOR PROJECTS

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 25 (LOAN)
HEAD 77 ITEM 26 (TECHNICAL ASSISTANCE COUNTERPART)
HEAD 77 ITEM 65 (LOCAL CONTRIBUTION)

RELATED PROJECTS : Lilongwe Agricultural Development Project
Shire Valley Agricultural Development Project
Cotton Development
Settlement Branch
Fertiliser Subsidy

1. FINANCIAL SUMMARY

(a) Funds Requested (Categories in Part A and B of this Project are those agreed between the Federal German Republic and Malawi Government.)

Category	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
A. LOAN					
(0-1) Credit Finance	9,395	13,045	6,500	-	19,545
(0-2) Sprayers Subsidy	7,500	12,000	10,500	-	22,500
(0-3) Provision of Marketing Facilities	950	3,161	-	-	3,161
(0-4) Boreholes	8,500	12,760	-	-	12,760
(0-5) Roads	8,500	30,000	24,941	-	54,941
(0-6) Buildings for Extension Services	7,500	23,300	7,370	-	30,670
(0-7) Loans to F.M.B.	8,000	28,000	-	-	28,000
(0-8) Transport	-	1,125	-	-	1,125
TOTAL LOAN	50,345	123,391	49,311	-	172,702
B. TECHNICAL ASSISTANCE - COUNTERPART FUND					
(0-1) Chitala Farm Institute	550	3,470	3,620	3,620	10,710
(0-2) Planning and Demonstration Units	1,380	8,936	8,936	8,936	26,808
(0-3) Unallocated Contingencies	-	-	-	-	-
TOTAL TECHNICAL ASSISTANCE	1,930	12,406	12,556	12,556	37,518
C. LOCAL CONTRIBUTION (Malawi Government Categories)					
2 Buildings	350	17,500	2,000	-	19,500
8 Personal Emoluments	2,900	13,766	19,810	-	33,576
9 Running Expenses	1,200	6,997	8,523	-	15,520
TOTAL LOCAL	4,450	38,263	30,333	-	68,596
TOTAL PROJECT	56,725	174,060	92,200	12,556	278,816

(b) Non-British, non-Malawi Expenditure

Not applicable.

(c) Previous Expenditure

	£	Cumulative Total
A. LOAN		
To 31/12/68	26,848	26,848
1969 Printed Estimates	250,330	
1969 Revised Estimates	218,855	
1969 Estimated Carry-forward	31,475	
Of which Jan/March 1970	26,475	
1970/71	5,000	
B. TECHNICAL ASSISTANCE - COUNTERPART FUND		
To 31/12/68	637	637
1969 Printed Estimates	9,025	
1969 Revised Estimates	6,790	
1969 Estimated Carry-forward	2,235	
Of which Jan/March 1970	1,930	
1970/71	305	
C. LOCAL CONTRIBUTION		
To 31/12/68	3,344	3,344
1969 Printed Estimates	17,470	
1969 Revised Estimates	17,175	
1969 Estimated Carry-forward	295	
Of which Jan/March 1970	295	

(d) Source of Finance

	1968	1969	Jan-Mar 1970	1970/71	Residual	TOTAL
A. FEDERAL GERMAN REPUBLIC LOAN	26848	218855	50345	123391	49311	468750
B. TECHNICAL ASSISTANCE COUNTERPART FUND	637	6790	1930	12406	25112	46875
C. LOCAL CONTRIBUTION	3344	17175	4450	38263	29683	92915
TOTAL PROJECT	30829	242820	56725	174060	104106	608540

2. PROJECT TARGET

Phase I of the project aims at increasing the production of cotton in the Salima Lakeshore area from the 1966 level of 3,000 short tons of seed cotton off an estimated 13,000 acres to a target of 8,000 short tons of seed cotton off 20,000 acres in 1972.

The target for 1972 is to produce 3,200 "average improved" farmers, growing 4 acres of sprayed cotton each, together with some 6,000 improved growers, each growing about 1 acre of unsprayed cotton.

Expected Completion Date

The Loan agreement of the project provides for the first phase of the project to be completed within five years of commencement, that is by 1973.

3. BACKGROUND INFORMATION

Shortly after Independence in 1964 the Government of the Federal Republic of Germany offered assistance to the Malawi Government for the development of agriculture.

As a result an agreement was concluded between the two governments for the development of cotton production on the Salima Lakeshore, in an area of approximately 1,560 sq. miles stretching from Chia Lagoon in the north to Golomoti in the south. The population of this area is estimated to be about 150,000 people.

The project agreement was concluded in 1968. A German Technical Assistance Team started work, and initial Malawi Government staff were appointed, in the same year. The German Team includes experts in the fields of land planning, extension, training and administration.

The project is designed to reach its targets by:

(i) intensifying the extension effort to the existing growers, urging them towards an average of 4 acres of sprayed cotton yielding at least two short tons of seed cotton per farmer;

(ii) providing short term credit for fertilizer and pest control;

(iii) improving the infrastructure of roads, markets and water supplies;

(iv) planning and laying out a further 20,000 acres of unused land suitable for cotton for occupation by settlers in the traditional manner i.e. at no cost to Government funds;

(v) improving the facilities for farmer training at the Chitala training centre. The policy is to steadily expand cotton production from improved farmers, while at the same time permitting the small marginal grower to change from cotton to groundnuts or any other suitable crop for a proper rotation.

The following is a progress report up to December 1969:-

Settlement

1,045 acres cleared, of which 980 acres have been ridged and planted.

379 plots have been laid out, of which 267 are occupied.

Boreholes

47 were dug in 1969, making a total of 66.

Roads

130 miles of roads have been cleared and 80 miles graded.

Building Programme

At Salima the following houses have been constructed : 2 EL2, 6 PL2, 1 DL2 and 1 CL6; at Chipoka 3 PL houses and 1 office/store. 1 credit centre has also been built.

Markets

All markets have been equipped with scales and cash registers.

4. PROPOSED WORK 1970-73

During the remaining three years of this phase of the project the following will be carried out :-

(a) Credit will be provided for sprayers and insecticides;

(b) Finance will be made available to subsidize the sale of sprayers.

(c) Completion of the borehole programme. About 75 - 80 boreholes are to be drilled;

(d) Continuation of programme for improved roads and markets;

(e) Construction of houses, offices and credit centres for the Extension Service;

(f) Continuation of a programme for training farmers and project staff.

Under the German Technical Assistance Programme experiments are being carried out on the potential for rice growing by irrigation in the project area. Settlement Projects, both dry land and irrigated, are being carried out in association with the project by the Settlement Branch of the Ministry of Agriculture, with help from the German Technical Assistance Team.

It is hoped that funds will be obtained for the improvement of health facilities in the area, both curative and preventive, and for health education including home management and nutrition.

A second phase of the project is now under consideration and this may include a high input settlement programme wherein the settlers are given assistance in the clearance and preliminary cultivation of their holdings.

The project area will be returned to the regular extension service on completion of the project, and the extension service establishment is being increased steadily to meet such eventualities.

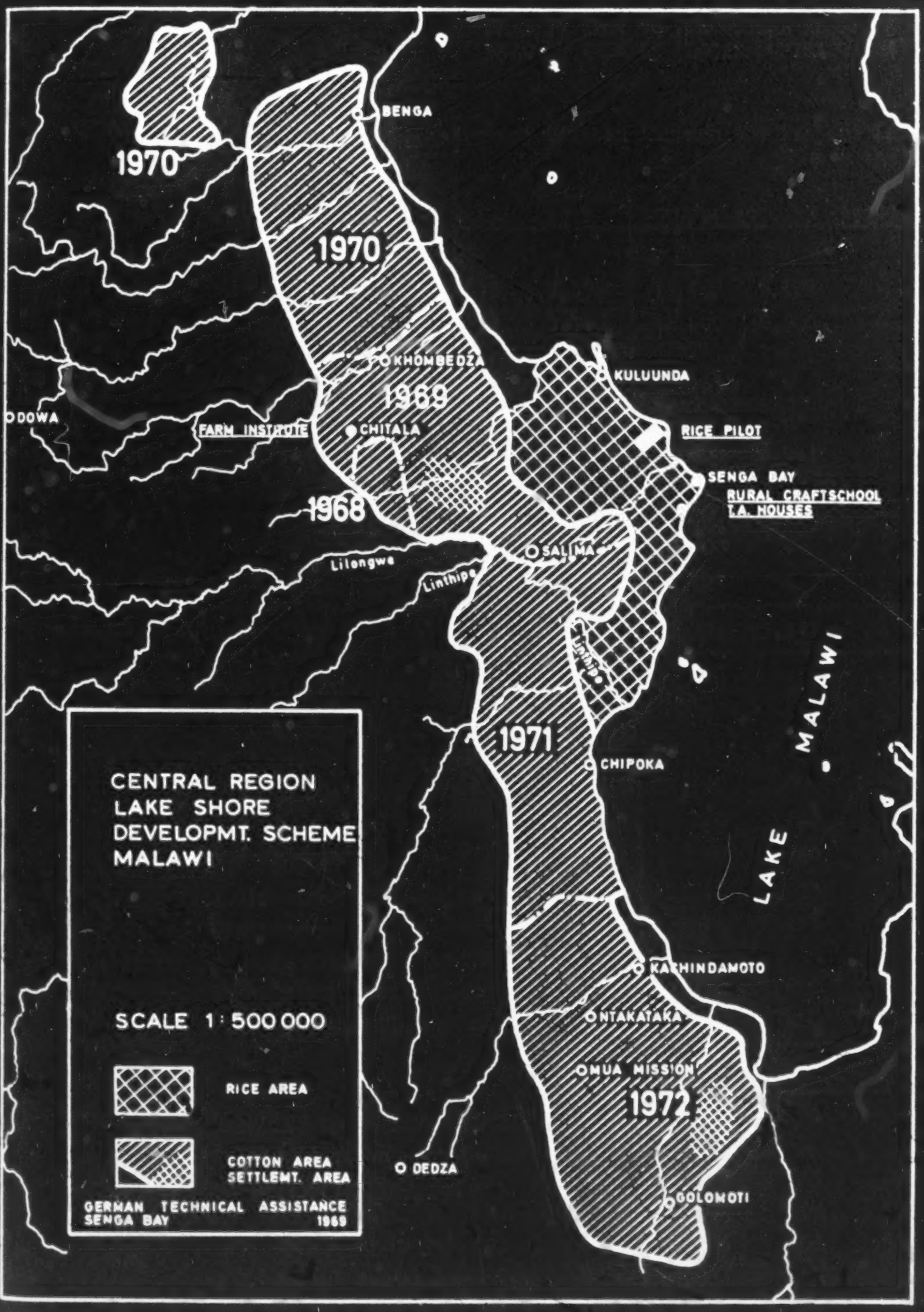
5. JUSTIFICATION FOR PROPOSED WORK

The project is intended to induce farmers on the Salima Lakeshore to adopt improved agricultural practices and so bring about an increase in agricultural output and income in the immediate future. Although the emphasis is on cotton, so as to make a rapid impact on the farmers' income and the nation's foreign exchange holding, beneficial side effects will also be shown in the production of maize and groundnuts from this area. The proposals were intensively studied by the Federal German Government in connection with the application for loan funds and were accepted as being beneficial and practical.

6. EXECUTION AND SUPERVISION

The Scheme is executed by the Salima Division extension staff of the Ministry of Agriculture with the planning done by the German Technical Assistance Team, under the leadership of the German Project Co-ordinator, who is also the Malawi Government's Project Manager. The Project Manager will be responsible, through the Chief Agricultural Development Officer, to the Secretary for Agriculture for the execution of the programme.

SALIMA LAKESHORE DEVELOPMENT PROJECT



in the Northern Region, the soils being relatively fertile and rainfall reliable. Livestock play a very important role in the area, backed by crops of maize, groundnuts, beans and oriental tobacco.

The overall cattle population is one per ten acres, which creates a marked cometition for land during the cropping season (November to May). Generally cattle are forced from the upland cropping areas during this time into the dambo areas. This procedure is a complete reversal of the correct utilisation of grazing in upland and dambo areas and results in a rapid degeneration of valuable dry season grazing in the dambos. Traditionally cattle are herded in fairly small easily controlled groups of from 10 to 30 head by men or young boys. Thus in any area of 1,000 acres three or four men can be expected to be fully occupied herding no more than 100 head of cattle. All livestock are penned up at night to avoid crop damage or straying and are invariably taken out late in the day resulting in very short grazing hours.

In the project area upland and dambo occur in the ratio of 1:1 made up of blocks of upland traversed by broad/extending from the /dambos watershed to the floodplain of the Rukuru. Water is plentiful.

Dip tanks supervised by the Veterinary department are situated in the project area but are not utilised by all cattle owners due to the reluctance of some to walk the maximum distance of 10 miles.

The human population estimated at 60 per square mile is situated randomly through the project area. Upland holdings vary in size between 5 and 35 acres with a mean (estimated from areas already surveyed) of 14 acres. 15% of all families own cattle, the average herd size being 23 head, with a very high bull to cow ratio of 1:3.5.

The people of the area have been particularly responsive to extension efforts, and are willing to assist the project by self-help.

4. PROPOSED WORK 1970/73

The project aims to establish control over livestock-grazing in a portion of the headwater area of the South Rukuru river by means of fencing, and the introduction of rotational grazing. This will ensure much more efficient utilisation of available grazing areas and permit a suitable cropping programme to be developed in the non-grazing areas without the perennial problem of damage by uncontrolled livestock. The proper land use of the entire area will be planned on a catchment basis, access roads within the area will be marked and constructed, and marker contour bunds pegged to assist proper alignment of planting ridges. The delineation of suitable and unsuitable cropping and grazing areas together with the above physical measures is expected markedly to improve both conservation of water and soil in the area, and make utilisation of available land more profitable in terms of crop and animal production. The project aims to provide the technical staff required to assist in planning the layout, and to control the large amount of self-help labour envisaged. Basic vehicles for transport and marking contours and semipermanent fencing materials will also be required.

A land use capability survey will be carried out in the project area and upon its results the relative positions and acreages of arable and non-arable areas ascertained. From this the areas for controlled grazing on the uplands and the dambo areas will be selected, and in consultation and by agreement with the traditional leaders will be declared non-cropping areas, to be fenced, and their use to be controlled by a grazing committee. All materials (except wire and cement) and labour for the fencing will be provided on a self-help basis, and future maintenance and repairs of fencing will also be undertaken by self-help. On the assumption of paddocks being approximately 150 acres in extent the cost of wire and cement will be £2. 2. 6d. per animal enclosed. It is proposed that cattle owners repay this amount at a rate of 5/- per animal per year.

Cattle will use the fenced dambo paddocks between November and January, and will move to upland paddocks between February and May. Once crops have all been harvested cattle will be allowed out of the paddocks to eat crop residues and to feed in the unfenced dambo areas. Improved techniques of cattle management will be encouraged by technical staff through the grazing committees. The emphasis will be on regular dipping (enforced while cattle are in paddock) culling unproductive stock, and controlled breeding by the introduction of improved bulls.

In the past, work has been undertaken by staff paid from Land Use Services votes, but the success achieved now justifies a separate project. Further development of the area along the lines proposed will continue in 1970/71 with the marking and construction of physical conservation measures in the arable areas and the marking and construction of crest access roads as a preliminary (it is hoped) to a greatly expanded programme of fencing and land reorganisation in the second and third years of the project.

In 1970/71 two conservation assistants will peg and supervise construction of necessary crest access roads within the area, and will peg and supervise construction of ploughed contour marker bunds to assist farmers in the proper alignment of their planting ridges.

The project area for 1970/71 is 4,000 acres in extent stretching northwards from the present small investigational pilot project at Mjinge, between the Zambian border and the South Rukuru river. In 1971/72 and 1972/73 adjacent areas on the east of the Rukuru totalling 30,000 and 50,000 acres will be included.

It will be necessary to construct housing for the technical staff in charge of the project, but this housing will be handed over for use by regular agricultural extension field staff when the project has been successfully established.

5. JUSTIFICATION FOR PROPOSED WORK

In 1968 a considerable amount of preliminary work was carried out at Mjinge, an area included in, and considered typical of the project areas mentioned above. Much useful information on soil types, cattle and human population distribution patterns, farm sizes etc. was gathered. Very quickly it became apparent that the lack of control over livestock constitutes the greatest problem to correct land utilisation. Above all it was found that the people living in this 8,000 acre area were very much aware of the problem. It was apparent to them that only fencing could solve the problem and that areas would have to be set aside for paddocking. The local committee quickly agreed on and demarcated two upland sites which were declared non-cropping areas. No problem was experienced in finding suitable dambo areas but no fencing has been carried out due to lack of funds.

A bunding programme was instituted at Mjinge and 500 acres conserved, farm boundaries re-aligned, and crop rotations established.

Properly planned and lined access roads suitable for light vehicles were constructed cheaply by tractor. In the project area this system of bunding, reorganising and road building will be modified in the light of experience gained at Mjinge.

The area is representative of large tracts of similar land forms in the Mzimba district and elsewhere. It is essential to know more about proper cattle management techniques in places where dambos constitute so large a proportion of the total land area, and this scheme is intended as a start in the development of full use of the potential of these areas.

Although the project appears at first sight to concern only the cattle owners of the area, both they and those without any cattle stand to gain, the former by the attainment of better animal health, the introduction of improved bulls and the conservation of feed for the dry season, the latter by being able to grow crops without damage by uncontrolled cattle.

Without initial input into fencing materials and the provision of housing and sufficient equipment for the technical staff the scheme will not be feasible, and for this reason funds are requested to initiate a project of potentially great national significance.

6. EXECUTION AND SUPERVISION

The work will be under the control of the Principal Land Use Officer, through the Conservation and Planning Officers, Northern Region.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : DAMBO UTILISATION PROJECT

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/TECHNICAL SERVICES

MALAWI DEVELOPMENT ESTIMATES, 1969 : NEW PROJECT

BRITISH AIDED PROJECT NO. : NEW PROJECT

1. PROJECT OFFICER

Principal Land Use Officer

2. FINANCIAL DETAILS

(a) Details of Expenditure

	Notes	Jan-Mar 1970	1970/1	1971/2	1972/3	Total 3 Yrs.
2 Buildings						
2 EH.5 houses (W)	(1)		-	1,200	1,200	2,400
7 PH.2 houses (W)	(2)		-	1,500	2,150	3,650
Portable housing	(3)		-	500	250	750
		-	-	3,200	3,600	6,800
6 Plant and Vehicles						
Tractor and plough	(4)		-	1,500	-	1,500
Trailer for tractor	(5)		-	300	300	600
Farm carts	(6)		-	300	400	700
		-	-	2,100	700	2,800
7 Other Equipment						
Barbed wire and fencing tools and materials	(7)		-	7,600	10,700	18,300
8 Personal Emoluments						
2 T.O.s (1/II)	(8)		-	750	1,500	2,250
Technical Assistants	(9)		400	400	1,000	1,800
Development Assistants	(10)		-	1,500	4,500	6,000
Labour	(11)		589	750	1,200	2,539
Tractor Drivers			-	200	400	600
		-	989	3,600	8,600	13,189
9 Running Expenses						
Mairtenance & running tractors			-	600	1,200	1,800
Transport and Travelling			450	200	520	1,170
Cement, culvert rings	(12)		-	1,000	1,500	2,500
		-	450	1,800	3,220	5,470
TOTAL		-	1,439	18,300	26,820	46,559

(W) = Costed for construction by Ministry of Works and Supplies.

(b) Notes on Expenditure

(1) There are expected to be 8 new Regular Gauging Stations operating all year round, and 29 new Miscellaneous Gauging Stations for records of dry season low flows.

(2) There will be two mobile teams of recorders operating the current meters. Each team will consist of 1 Field Assistant and two gauging assistants with a Landrover and Driver. There will also be a resident gauge reader at each of the Regular Gauging Stations.

(c) Import Content

Approximately £4,000 with worth of vehicles and equipment.

(d) Breakdown of Expenditure by Region

All expenditure in Southern Region.

3. LOCATION OF CONSTRUCTION

On the following rivers in the Cholo/Mlanje Tea Area:

Namadzi
Kwakwazi
Natande
Nsikidzi
Nswadzi
Lipumulo
Khonjeni
Napemba

1970/71 DEVELOPMENT ESTIMATES
PROJECT SUBMISSION

PROJECT TITLE	:	FERTILISER SUBSIDY
RESPONSIBLE MINISTRY/DEPARTMENT	:	AGRICULTURE/PLANNING UNIT
MALAWI DEVELOPMENT ESTIMATES, 1969	:	HEAD 77 ITEMS 22 & 71
BRITISH AIDED PROJECT NO.	:	24
RELATED PROJECTS	:	Nil

1. FINANCIAL SUMMARY

(a) Funds Requested

	Jan-Mar 1970	1970/1	1971/2	1972/3	Total 3 Years
10. Special Expenditure (U.K. Loan)	Nil	76,500	50,000	Nil	126,500
10. Special Expenditure (Malawi Gov't)	Nil	111,500	104,000	66,500	282,000
TOTAL	Nil	188,000	154,000	66,500	408,500

(b) Non-British, Non-Malawi Expenditure

See note on page 3

(c) Previous Expenditure

U.K. LOAN (ITEM 22)	£	Cumulative Total
1966	75,000	75,000
1967	93,744	168,743
1968 Actual Expenditure	159,970	328,713
1969 Printed Estimates	93,500	
1969 Revised Estimates	81,412	
1969 Estimated Carry-forward	Nil	
MALAWI LOCAL RESOURCES (ITEM 71)		
1968 Actual Expenditure	Nil	Nil
1969 Printed Estimates	112,400	
1969 Revised Estimates	81,412	
1969 Estimated Carry-forward	Nil	

(d) Source of Finance

Half of subsidy on sulphate of ammonia ex U.K. loan funds. The rest from local resources. See (a) above.

2. PROJECT TARGET

To sell 40,000 short tons of fertiliser a year to Malawi farmers outside the major project areas by 1975 while at the same time phasing out the existing subsidy which amounts to nearly 50% of the true cost.

Expected Completion Date

This subsidy is being progressively phased out.

/ 3 ....

3. BACKGROUND INFORMATION

The proper and timely application of fertiliser can lead to significant increases in crop yields. It permits more intensive production on small units of land, and thus releases land for cultivation of export earning cash crops. Through the use of fertiliser it is planned to double Malawi's output of maize for food from 838,000 tons to 1,700,000 tons by 1985, without an increase in acreage.

Experience has indicated that the best means of making fertiliser available to farmers is through the system of subsidised cash sales, and up to the present fertiliser has been sold at half its cost price, i.e. at 12/6 per 100 lbs. of sulphate of ammonia. Any person buying 5 ton lots for cash received a further 10% discout. This system encourages group sales, particularly through Farm Clubs.

Prior to 1965 the F.M.B. undertook all aspects of the fertiliser programme for customary land, including ordering, finance, distribution and resale. From 1965 onwards British loan funds met half the cost of the subsidy, except for 1968 when they met the whole cost.

Sales of fertiliser through the F.M.B. have risen from 183 short tons in 1960 to 9390 short tons in 1966/67, 10,840 short tons in 1967/68 and 11,690 short tons in 1968/69. It is estimated that the fertiliser sales in 1969/70, for which the subsidy is included in the 1969 estimates, will be about 14,000 tons. Most of this is expected to be sulphate of ammonia as there is very little demand for the current N.P. mixture, the price of which is being dropped to parity with sulphate of ammonia in order to clear stocks. All fertiliser is thus being sold at 15/- per 100 lb. bag in the 1969/70 season. A series of bad seasons for cotton and dark fired tobacco in part account for the recent slow growth in sales.

In 1970/71 it is proposed to put up the price of all fertiliser to 18/- per 100 lb. bag, and the revised target for sales is 17,000 tons of sulphate of ammonia and 2,000 tons of mixture.

If sales do not reach the set targets and stocks are carried forward, lower amounts will be ordered than are expected to be sold and the subsidy, payable on the quantity ordered only, will be reduced accordingly.

4. PROPOSED WORK 1970/73

It is proposed to increase sales to villagers according to the revised schedule shown below, while cutting back the subsidy until it is eliminated in 1975.

Year	Sulphate of Ammonia			N.P. Mixture		
	S.Tons Sold	Price per 100 lb. bag	Total Subsidy	S.Tons Sold	Price per 100 lb. bag	Total Subsidy
1970/71	17,000	18/-	153,000	2,000	18/-	35,000
1971/72	20,000	22/-	100,000	4,000	22/-	54,000
1972/73	23,000	full	Nil	7,000	26/-	66,500
1973/74	26,000	cost	Nil	10,000	30/-	55,000
1974/75	28,000	i.e. 27/-	Nil	12,000	full cost	Nil

The British Loan contribution is calculated to meet half of the subsidy on Sulphate of Ammonia, which will be of British manufacture. The mixture will be non-British and will thus not qualify for British loan funds.

It is possible that no more than 12,000 tons of Sulphate of Ammonia and no mixture will have to be ordered in 1970 to make up the quantities shown above, owing to continued slow sales resulting in a carry-forward into 1970/71 season of 5,000 tons of Sulphate of Ammonia and 2,000 tons of mixture. If this happens the subsidy for 1970/71 could be as low as £108,000, half of which would come from the U.K./Malawi Loan, and half from local resources, i.e. £54,000 each.

5. JUSTIFICATION FOR PROPOSED WORK

It is considered that in the early stages of agricultural expansion the payment of a subsidy is a cheaper way of encouraging the use of fertiliser than short term credit. Steps are now being taken in the Major Project Areas to work out a practicable short term credit system for smallholders based on marketing facilities. Ultimately it is hoped that short term credit will in the same way take the place of subsidy throughout the whole country.

6. EXECUTION AND SUPERVISION

The scheme is supervised by the Department of Agriculture. The Farmers Marketing Board will continue to purchase, sell and account for the fertiliser.

Note: The Sulphate of ammonia is of British manufacture on which half the cost of the subsidy is shown under British loan funds. The mixture is of German origin, and the whole subsidy on this less gifts from the German Government is included in the local contribution.

HEAD 77 Agriculture - Other Aided Projects

Item 28	Turkish Tobacco Development (Germany)
30/31	Salima Lakeshore Development Project (Germany)
32	Lilongwe Agricultural Development Project (I.D.A.)
34	Shire Valley Agricultural Development Project (I.D.A.)
36	Chikonje Cotton Growers Scheme (OXFAM)
37	Borehole Construction - Danish F.F.H.C.
38	Home Economics Training for Women (OXFAM)
39	Village Grain Storage Scheme (OXFAM)
61	Local Costs - Taiwan Technical Assistance
62	Local Costs - UNDP Land & Water Resources
72	Local Costs - Mapping for Dwangwa Project
73	Local Costs - Seed Industry Development (UNDP)
74	Pre-planning Major Schemes

1970/71 DEVELOPMENT ESTIMATES
PROJECT SUBMISSION

PROJECT TITLE : TURKISH TOBACCO DEVELOPMENT (LOAN)

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/EXTENSION

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 23

RELATED PROJECTS : Rural Water Supplies

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
3 Water Supplies	-	4,190	-	-	4,190
4 Roads and Bridges	-	10,030	-	-	10,030
TOTAL	-	14,220	-	-	14,220

(b) Non-British, non-Malawi Expenditure

Not applicable.

(c) Previous Expenditure

	£	Cumulative Total
To 31/12/67	68,167	68,167
1968 Actual Expenditure	7,582	75,749
1969 Printed Estimates	20,564	
1969 Revised Estimates	3,172	
Estimated carry-forward	14,220	
Of which Jan-March 1970	-	
1970/71	14,220	

(d) Source of Finance

Federal German Republic Loan.

2. PROJECT TARGET

The objective of this project was to achieve an output of 300,000 lbs. of high quality Turkish tobacco by 1969 in the districts of Mzimba and Rumpi (Northern Region) and Kasungu (Central Region).

Expected Completion Date

It was originally intended to complete this project by 31st December 1969 but it has now been extended to 1970/71 in order to utilize the balance of the German Loan.

3. BACKGROUND INFORMATION

The Turkish tobacco project commenced in 1964 as one of those projects designed to produce a general expansion in the production of certain crops. This project is financed from a Federal German Loan. Its original aim was to achieve a target of 300,000 lbs. of high quality Turkish tobacco per year by the end of 1969 by providing the necessary infrastructure of boreholes, roads, training centres, markets and transport. Accordingly, roads and bridges have been constructed; the Divisional Training Centres at Mbawa and Bolero have been expanded to cater particularly for Turkish tobacco growers and markets have been improved by the Farmers Marketing Board.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : SALIMA LAKESHORE DEVELOPMENT PROJECT (PHASE I)
(FORMERLY CENTRAL REGION LAKESHORE DEVELOPMENT)

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/MAJOR PROJECTS

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 25 (LOAN)
HEAD 77 ITEM 26 (TECHNICAL ASSISTANCE COUNTERPART
HEAD 77 ITEM 65 (LOCAL CONTRIBUTION)

1. PROJECT OFFICER

The Chief Agricultural Development Officer through the Project Manager.

2. FINANCIAL DETAILS

(a) Details of Expenditure	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
A. LOAN						
(0-1) Credit Finance	(1)	9,395	13,045	6,500	-	19,545
(0-2) Sprayers Subsidy	(2)	7,500	12,000	10,500	-	22,500
(0-3) Provision of Market Facilities	(3)	950	3,161	-	-	3,161
(0-4) Boreholes	(4)	8,500	12,760	-	-	12,760
(0-5) Roads	(5)	8,500	30,000	24,941	-	54,941
(0-6) Buildings for Extension Services	(6)	7,500	23,300	7,370	-	30,670
(0-7) Loans to F.M.B.	(7)	8,000	28,000	-	-	28,000
(0-8) Transport	(8)	-	1,125	-	-	1,125
TOTAL LOAN		50,345	123,391	49,311	-	172,702
B. TECHNICAL ASSISTANCE COUNTERPART FUND						
(0-1) Chitala Farm Institute						
Food for 48 trainees @ 2/6 per trainee per day		425	1,900	2,000	2,000	5,900
2 Cooks		60	240	240	240	720
2 Caretakers		45	180	180	180	540
1 Night Watchman		20	75	75	75	225
Stationery		-	175	175	175	525
Running Costs (electric Plant)		-	750	800	800	2,350
Running Costs (telephone)		-	150	150	150	450
		550	3,470	3,620	3,620	10,710
(0-2) Planning and Demonstration Units						
2 Demonstration Assistants at £120 each	(9)	60	240	240	240	660
10 Labourers	(9)	-	500	500	500	1500
Materials & Equipment	(9)	-	506	506	506	1518
8 Technical Assistants @ £150 per annum	(10)	300	1,200	1,200	1,200	3600
2 Clerical Officers @ £150 per annum	(10)	75	300	300	300	900
Subsistence allowance for 8 T.A.s	(10)	40	200	200	200	600

(2) Planning & Demonstration Unit - Cont'd

	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
Holiday Grants for 8 T/A.s & 2 C.O.s	(10)		30	30	30	90
50 Labourers	(11)	500	2,400	2,400	2,400	7,200
Running of Irrigation Pump	(11)	25	2,000	2,000	2,000	6,000
10 Development Assistants	(12)	300	1,200	1,200	1,200	3,600
Subsistence Allowance for the 10 D.A.s	(12)	60	250	250	250	750
Bicycle Allowance for the 10 D.A.s	(12)	20	80	80	80	240
Leave Grants for the 10 D.A.s	(12)	-	30	30	30	90
		1,380	8,936	8,936	8,936	26,808
TOTAL TECHNICAL ASSISTANCE		1,930	12,406	12,556	12,556	37,518

C. LOCAL CONTRIBUTION

2 Buildings					
8 PL1 Houses for T.A.s	-	5,200	-	-	5,200
25 Traditional Houses for D/As @ £80 each	-	2,000	-	-	2,000
Houses at Chitala Farm Institute	350	10,300	-	-	10,300
1971/72 Programme	-	-	2,000	-	2,000
	350	17,500	2,000	-	19,500
8 Personal Emoluments					
1 Executive Officer	138	550	-	-	550
3 Clerical Officers	112	450	-	-	450
3 Drivers	150	972	-	-	972
1 Carpenter	40	160	-	-	160
6 Ox-trainers	110	432	-	-	432
85 Dev.Assistants @ £120 p.a.	2,350	10,200	-	-	10,200
3 Messengers	-	255	-	-	255
3 Night Watchmen	-	144	-	-	144
3 Labourers	-	120	-	-	120
Leave Grant for (1 P.O. & 8 T.O.s)	-	72	-	-	72
Leave Grant for (22 T/A.s)	-	132	-	-	132
Leave Grant for 3 C.O.s	-	15	-	-	15
Leave Grant for 85 D.A.s	-	255	-	-	255
Leave Grant for 3 Messengers	-	9	-	-	9
1971/72 Programme	-	-	19,810	-	19,810
	2,900	13,766	19,810	-	33,576

Details - Cont'd	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
9 Running Expenses						
Transport & Travelling Senior Staff		200	900	-	-	900
T/A.s - Subsistence Allowance		110	440	-	-	440
T/A.s - Bicycle Allowance		50	231	-	-	231
D/A.s - Subsistence Allowance		140	566	-	-	566
- Bicycle Allowance		100	893	-	-	893
Messenger Bicycle Allowance			32	-	-	32
M. & R.E. - 3 Vehicles		600	2,400	-	-	2,400
Stationery		-	400	-	-	400
Telephone		-	390	-	-	390
Telephone Installation at G.T.A. Headquarters		-	240	-	-	240
Telephone Rent at G.T.A. Headquarters		-	370	-	-	370
Water		-	60	-	-	60
Uniform		-	15	-	-	15
Office Sundries		-	60	-	-	60
1971/72 Programme		-	-	8,523	-	8,523
		1,200	6,997	8,523	-	15,520
TOTAL LOCAL		4,150	38,263	30,333	-	68,596

Breakdown for the years 1971/72 and 1972/73 will depend on progress in 1970/71.

(b) Notes on Expenditure

(1) Expenditure for credit element of 1,000 Gloria Sprayers and insecticides.

(2) Subsidy element of 1000 Gloria Sprayers at cash price of £11 each.

(3) Construction by F.M.B.

(4) Completion of borehole programme based on agreed rate of £500 per hole.

(5) Expenditure includes M. & R.E. of machinery and equipment as well as material for culvert construction such as rings, cement, bricks and wages for all labour involved.

(6) Continuation of building programme for the Extension Service.

(7) Loans granted to F.M.B. for constructing and expanding markets and storage facilities.

(8) Purchase of an additional L.W.B. Landrover Station Wagon.

(9) Provision for 2 Demonstration Farms.

(10) P/Emoluments for 8 T.A.s and 2 C.O.s attached to the Planning Unit.

(11) Labour and pump for the Rice Pilot Scheme.

(12) Provision for 10 Development Assistants attached to the Credit Unit.

(c) Import Content

See separate schedule for Ministry of Agriculture.

(d) Breakdown of Expenditure by Region

All expenditure will be in the Central Region.

3. LOCATION OF CONSTRUCTION

Throughout the project area.

Details to be provided to Ministries carrying out the work.

1970/71 DEVELOPMENT ESTIMATES

PROJECT SUBMISSION

PROJECT TITLE : LILONGWE AGRICULTURAL DEVELOPMENT PROJECT (PHASE I)
(Formerly Land Reorganisation - Central Region)

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/MAJOR PROJECTS

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 27 (I.D.A.)
HEAD 77 ITEM 67 (LOCAL)

RELATED PROJECTS : Shire Valley Agricultural Development Project
Salima Lakeshore Development Project
Seed Industry Development Project
Maize and Groundnut Development

1. FINANCIAL SUMMARY

(a) Funds Requested (Categories in this project are those agreed between the Malawi Government and the I.D.A.)

IDA Category I	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
(0-1) Portable Houses, House & Office Equipment	8,619	18,100	16,500	-	34,600
(0-2) Vehicles and Machinery	25,460	106,455	8,300	-	114,755
(0-3) Mapping Equipment & Aerial Surveys	18,424	2,544	1,800	-	4,344
(0-4) Well Drilling Machinery, Casings, Pumps and Fittings	2,000	20,900	4,920	-	25,820
(0-5) Fertiliser	4,000	26,950	32,550	-	59,500
(0-6) Minor Equipment not specified above	10,431	5,086	7,380	-	12,466
(0-7) Staff (foreign exchange cost)	8,500	39,100	44,965	-	84,065
TOTAL IDA CATEGORY I	77,434	219,135	116,415	-	335,550
IDA Category II					
(0-8) Land Development	26,930	170,746	50,635	-	221,381
(0-9) Land Reorganisation and Registration	15,050	48,756	55,700	-	104,456
(0-10) Provision of Marketing and Storage Facilities	-	-	-	-	-
(0-11) Extension and Credit Services	33,522	133,983	85,408	-	219,391
(0-12) Management, Administration and Training	90,200	154,287	50,629	-	204,916
(0-13) Project Evaluation and Planning	2,699	12,324	12,600	-	24,924
(0-15) Loan to F.M.B.	14,000	23,000	28,000	-	51,000
TOTAL IDA CATEGORY II	182,401	543,096	282,972	-	826,068

(a) Funds Requested - Cont'd	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
IDA Category III					
(0-14) Unallocated	-	-	-	627,980	627,980
TOTAL IDA CATEGORY III	-	-	-	627,980	627,980
TOTAL PROJECT	259,835	762,231	399,387	627,980	1,789,598
Of which: I.D.A. funds	213,005	618,582	319,269	625,381	1,563,232
Local Contribution	46,830	143,649	80,118	2,599	226,366

Note: Categories (0-1) to (0-7) inclusive are 100% reimbursable from loan.
Categories (0-8) to (0-15) inclusive are 75% reimbursable from loan.

(b) Non-British, Non-Malawi Expenditure

Subject to I.D.A. Procurement Regulations

(c) Previous Expenditure	£	Cumulative Total
A. IDA		
To 31/12/68	285,650	285,650
1969 Printed Estimates	931,722	
1969 Revised Estimates	443,111	
1969 Estimated Carry-forward	488,611	
Of which Jan/March 1970	213,005	
1970/71	275,606	
B. LOCAL CONTRIBUTION		
To 31/12/67	4,697	4,697
1968 Actual Expenditure	51,425	56,122
1969 Printed Estimates	142,570	
1969 Revised Estimates	88,869	
1969 Estimated Carry-forward	53,701	
Of which Jan/March 1970	46,830	
1970/71	6,871	
Total Expenditure on the Project from commencement to 31/12/69		873,752

NOTE: Local Contribution liable to increase if full reimbursement not obtained from claims against IDA for Category I.

(d) Source of Finance	1967	1968	1969	Jan-Mar 1970	1970/71	Residual	TOTAL PROJECT
I.D.A.	Nil	285,650	443,111	213,005	618,582	991,813	2,552,161
LOCAL	4,697	51,425	88,869	46,830	143,649	81,264	416,734
TOTAL PROJECT	4,697	337,075	531,980	259,835	762,231	1,073,077	2,968,895

The I.D.A. Credit is for 6 million dollars which equals approx. £2,5 million.

2. PROJECT TARGET

The Credit Agreement between the Malawi Government and the International Development Association states the purpose of the project as follows :-

"The Project is the first four-year phase of the Lilongwe Development Programme, a long term programme for the development of infrastructure and the improvement of smallholder agricultural production in the Programme area. The Project consists of the following :-

1. Land Development
2. Land Reorganization and Registration
3. The Provision of Marketing and Storage Facilities
4. Extension, Supply and Credit Services
5. The Provision of Programme Management, Administrative Services and staff training.
6. Review and Evaluation of progress achieved."

The full text of the Description of the Project is appended.

Expected Completion Date

Under the Credit Agreement the project is expected to be completed by January 1972, but at the present rate of progress the infrastructure for Phase I should be completed 18 months ahead of schedule, i.e. by June 1971.

3. BACKGROUND INFORMATION

Immediately after Independence in 1964 the United Nations Development Programme commenced a special fund project called "Land and Water Resources Development, Southern Malawi". This project resulted in the granting of a credit by the International Development Association in February 1968. The project submission for this project is based on experience gained from a pilot project in the Tsabango area of the Lilongwe District, initiated at the request of the local people and carried out by the Malawi Government with funds from a British Government Development Loan.

The project started in February 1968 with the take over of the existing extension and land development organisation which had been operating in the pilot project.

Up to December 1969 the following had been achieved :-

1. Land Development

(a) Area covered by detailed physical plans	89,250 acres
Area covered by Water Diversions	89,250 acres (824 miles)
Length of Waterways constructed	42 miles
Length of Marker Ridges constructed	5,864 miles (85,750 acres)
(b) Mileage of new Crop Extraction Roads	199
Drifts and crossings constructed	46
Major Bridges constructed	5
Major Bridges reconstructed	2
Minor Bridges constructed	17
(c) Number of boreholes sited	122
Number of boreholes drilled	72

2. Land Reorganization and Registration

(a) Survey office established	
(b) Area covered by Aerial Photography $\frac{1}{25,000}$ for base mapping	557,000 acres
Area covered by $\frac{1}{10,000}$ Aerial Photography	13,000 acres
Area covered by $\frac{1}{5,000}$ maps	126,000 acres
(c) Townships covered by cadastral plans	1

3. Provision of Marketing and Storage Facilities

Markets located	7
Markets constructed	2

4. Extension, Supply and Credit Services

Improved varieties of maize and groundnut seed have been distributed, and improved planting techniques are being encouraged. Intensive sophisticated extension methods are being implemented and new methods are being discussed and tried out.

5. The Provision of Programme Management, Administrative Services and Staff Training

A Project Manager has been seconded to the scheme from the Agricultural Development Service of the World Bank.

Administrative, professional and technical staff have been engaged but some difficulties in recruitment have been experienced particularly of junior field staff. This is being overcome by the inservice training and newly recruited staff.

6. Review and Evaluation of Progress Achieved

An evaluation officer has been appointed. An evaluation survey has been launched and work has started on the building up of a "data bank". These studies will cover both the micro and macro-economic aspects of the project.

All aspects of the project are ahead of original target schedules with the exception of house/office construction and allied staff recruitment.

The evaluation programme will provide firm data for further projects and establish the most economic investment procedures.

PROPOSED WORK 1970/73

(a) To complete Phase I of the project as set out in the Credit Agreement.

At the present rate of progress most aspects of Phase I should be completed by March 1971. There are also expected to be substantial savings on the original estimated cost. These savings have resulted from reduced construction and staffing costs.

(b) To prepare Phase II of the project and implement it as soon as possible. This is being done with the help of the Agricultural Development Service of the World Bank.

Part of the savings on Phase I will be used for this. It is proposed that Phase II would integrate animal husbandry into the project in addition to extending the area of the work carried out in Phase I.

(Note

A third phase is envisaged to complete the full 15-year project.)

After development is complete the area will be returned to the regular extension service at a lower staff level than during the development phase. The development peronnel will, it is hoped, take over from the regular extension service another area for development. It is intended to increase the regular extension service establishment so that when the project is handed back extension work can continue at a higher level than before the project started.

5. JUSTIFICATION FOR PROPOSED WORK

The project was appraised and approved by the International Development Association of the World Bank. It is revolutionising agriculture in one of the most fertile and populous areas in the country.

6. EXECUTION AND SUPERVISION

The project is controlled by the Project Manager who is under the general direction of the Chief Agricultural Development Officer, who heads the Major Projects Division of the Ministry of Agriculture.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : LILONGWE AGRICULTURAL DEVELOPMENT PROJECT (PHASE I) (Formerly Land Reorganisation - Central Region)

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/MAJOR PROJECTS

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 27 (I.D.A.) HEAD 77 ITEM 67 (LOCAL)

1. PROJECT OFFICER

The Chief Agricultural Development Officer through the Project Manager.

2. FINANCIAL DETAILS

(a) Details of Expenditure	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
IDA Category I						
(0-1) Portable Houses, House and Office Equipment	(1)	8,619	18,100	16,500	-	34,600
(0-2) Vehicles & Machinery	(2)	25,460	106,455	8,300	-	114,755
(0-3) Mapping Equipment and Aerial Surveys	(3)	18,424	2,544	1,800	-	4,344
(0-4) Well Drilling Machinery, Casings, Pumps and Fittings	(4)	2,000	20,900	4,920	-	25,820
(0-5) Fertiliser	(5)	4,000	26,950	32,550	-	59,500
(0-6) Minor Equipment not specified above	(6)	10,431	5,086	7,380	-	12,466
(0-7) Staff (Foreign Exchange Cost)	(7)	8,500	39,100	44,965	-	84,065
TOTAL IDA CATEGORY I		77,434	219,135	116,415	-	335,550
IDA Category II						
(0-8) Land Development	(8)	26,930	170,746	50,635	-	221,381
(0-9) Land Reorganisation and Registration	(9)	15,050	48,756	55,700	-	104,456
(0-10) Provision of Marketing and Storage facilities	(10)	-	-	-	-	-
(0-11) Extension and Credit Services	(11)	33,522	133,983	85,408	-	219,391
(0-12) Management, Administration and Training	(12)	90,200	154,287	50,629	-	204,916
(0-13) Project Evaluation and Planning	(13)	2,699	12,324	12,600	-	24,924
(0-15) Loan to F.M.B.	(15)	14,000	23,000	28,000	-	51,000
TOTAL IDA CATEGORY II		182,401	543,096	282,972	-	826,068
IDA Category III						
(0-14) Unallocated	(14)	-	-	-	627,980	627,980
TOTAL IDA Category III		-	-	-	627,980	627,980
TOTAL PROJECT		259,835	762,231	399,387	627,980	1,789,598
Of which: I.D.A. Funds		213,005	618,582	319,269	625,381	1,563,232
Local Contribution		46,830	143,649	80,118	2,599	226,366

Note: Categories (O-1) to (O-7) inclusive are 100% reimbursable from loan.
Categories (O-8) to (O-15) inclusive are 75% reimbursable from loan.

(b) Notes on Expenditure

General

(i) The C.A.D.O. Organisation handles the Shire Valley and Salima Lakeshore Development Projects as well as this project. The headquarters costs of the organisation are at present included in the Lilongwe Project, but it is intended to isolate them in 1971/72.

(ii) The project organisation is divided into 5 major divisions namely :-

(1) Administration
(2) Land Development
(3) Land Reorganisation and Registration
(4) Extension and Credit Services
(5) Project Evaluation.

(iii) Details of the programme in 1971/72 will depend on progress in 1970/71.

(1) Portable Houses, House and Office Equipment

Jan-March 1970

22 portable field offices and stores for building section at £120 each	£2,640
25 portable field offices and stores for extension and credit at £120 each	3,000
Office Equipment and Machinery for above offices and temporary offices in Lilongwe	2,979
	£8,619

1970/71

Transfer of 5 prefabricated houses to new sites at £1,030 each	5,150
Purchase of safes, cash boxes, filing cabinets etc.	4,920
Purchase of 2 calculating machines @ £300 each	600
Purchase of 12 fans for temporary offices at Lilongwe at £15 each	180
Purchase of Land Registration Filing Equipment	2,010
Purchase of Field Radio Telephone for communication between Project H.Q. and Dev. Centres	2,500
Installation of new telephone exchange at H.Q.	300
	£18,100

(2) Vehicles and Machinery

Jan-March 1970

Land Development

1 7-ton tipper at £2,424	=	£2,424	
1 LWB Landrover at £1,014	=	£1,014	3,438

Extension and Credit

7 Escorts (Replacements) at £382	=	£2,674	
9 Escorts (New) at £670 (trade-in price)		6,030	
1 Personnel Carrier (New) @ £2,200	=	2,200	
1 5-ton flat lorry at £1,800	=	1,800	12,704

Extension (Buildings)

2 7-ton flat lorries at £2,235	=	£4,470	
2 7-ton tippers at £2,424	=	4,848	9,318
			£25,460

1970/71		
Land Development		
1 Grader (Special) at £9,400	= £9,400	
5 Graders at £8,800	= 44,000	
2 Bulldozers D6 at £16,800	= 33,600	
1 7-ton flat lorry (replacement) at £2,235	= 2,235	
1 7-ton tipper (replacement) @ £2,650	= 2,650	
1 LWB Landrover (replacement) @ £1065	= 1,065	92,950
Extension		
9 Escorts (New) at £670	= £6,030	
2 Escorts (replacement) @ £382 (trade-in price)	= 764	6,794
1970/71		
2 Escorts (Replacements) @ £382 (trade in price)	= 764	
1 Staff car (Replacement) at £1,000	= 1,000	1,764
Land Registration		
1 Escort (Replacement) at £382	= 382	382
Land Development		
Fast Moving spares for field repairs of heavy plant		4,565
		£106,455

(3) Mapping Equipment and Aerial Surveys

Jan-March, 1970		
Order for survey and drawing office equipment placed with West German firms	= 17,500	
Approximate price increase	= 924	£18,424
1970/71		
10 field survey equipment sets at £100		1,000
Evaluation Section Survey Equipment		644
Survey Training Equipment		550
Beacons		350
		2,544

(4) Well Drilling, Casings, Pumps and Fittings Machinery,

Jan-March, 1970	
Balance of order for pumps, casings and fittings placed overseas 1969, and transport and agency fees	£2,000
1970/71	
Drilling of 45 Boreholes at £420 each	18,900
Pump Engine Units and piping at £1,000	2,000
	£20,900

(5) Fertiliser

Jan-March, 1970	
Provision for purchase of fertiliser insecticides and improved seed before acceptance of tender	£4,000

1970/71

Fertiliser Tender - 850 tons @ approximately £27 per ton	22,950
Improved seeds and insecticides	4,000
	£26,950

(6) Minor Equipment not specified above

Jan-March 1970

Special tools for Heavy Plant	650
Mobile Extension Unit Equipment	1,450
Visual Aids Equipment	2,500
Teaching Equipment (Staff Training and Extension)	2,950
Survey Field Equipment	460
Extension Signs and Notices	1,946
Tents	300
50 Knapsacks for Radios and other extension equipment at £3.10/-	175
	£10,431

1970/71

Land Development		
Workshop Tools	£400	
Field Unit Tools	200	
Signposts and Boards	340	940
Extension Service		
Mobile Unit Equipment	1,740	
Training Centre Equipment	846	
Replacements and Tools	300	2,886
Land Registration		
Tools		150
Ox-Training		
Yokes and Chains	300	
Tents	300	600
Evaluation		
Tents	410	
Tools	100	510
		£5,086

(7) Staff (Foreign Exchange Cost)

Jan-March, 1970

Based on charges for one A.D.S. officer and nineteen expatriate officers	£8,500

1970/71

Based on charges for one A.D.S. officer and twenty-three expatriate officers	£39,100

(8) Land Development

Personal Emoluments	1st Quarter	1970/71
1 Senior Conservation Planning Officer (S9 GP.12)	£ 478	£1,910
1 Agricultural Officer (Conservation)(PO)	469	1,875
2 Senior Development Officers(S.T.O.III)	683	2,730
3 Development Officers (T.O., T.O.I/II)	383	1,529
4 Senior Field Assistants (S.T.A.)	122	1,952
24 Field Assistants (T/A)	885	3,905
9 Field Assistants (Training Grade)(SC.III)	288	1,151
	£3,308	£13,052

	1st Quarter	1970/71
Operators, Drivers and Labour	5,400	
Allowances	150	
Plant Operation	10,500	
Workshop operation	300	
Drawing office operation	400	
Bridges and Crossings (New)	2,000	
Field Housing	3,500	
Running Expenses - Motor Vehicles	1,200	
Maintenance of Houses	100	
Maintenance of Boreholes	72	
	£26,930	

1970/71

Personal Emoluments as above		£15,052
Operators, Drivers and Labour etc.		29,843
Allowances		300
Running Expenses - Motor Vehicles		10,845
Plant Operation - New Areas		65,936
Plant Operation and Maintenance - Old Areas		6,940
Workshop operation		800
Drawing Office Operation		1,200
Maintenance of Buildings		650
Roads and Bridges - 60 Crossings	£9,000	
3 Major Bridges	9,900	18,900
New Maps etc.		100
Training Expenses		180
Part cost of New Offices		20,000
		£170,746

(9) Land Reorganisation and Registration

Personal Emoluments

1 Senior Land Allocation Officer (S9 GP.12)	478	1,910
1 Agricultural Officer Registrar of Titles(P.O)	447	1,785
3 Demarkation Officers (T.O.)	113	1,350
3 Senior Field Assistants (Demarkation)	-	1,464
22 Field Assistants (Demarkation) (T/A)	666	2,662
9 Field Assistants (Trainees)	275	1,098
	£1,979	£10,269

Survey Registration

1 Senior Surveyor (S8 GP.12)	478	1,910
1 Staff Surveyor (P.O.)	447	1,785
1 Senior Photogrammetrist (S.T.O./T.O.III)	306	1,223
4 Photogrammetrists (TO/TO.I/II)	265	2,120
1 Cartographer (TO/TO.I/II/III)	306	1,223
1 Surveyor (TO/TO.I/II)	-	530
3 Senior Survey Assistants (S.T.A.)	-	1,464
2 Senior Cartographic Assistants (S.T.A.)	-	976
9 Cartographic Assistants (T.A.)	428	1,709
7 Survey Assistants (T.A.)	338	1,352
	2,568	14,292

Personal Emoluments (Breakdown as above)	4,547
Drivers, labour etc.	492
Running Expenses - Motor Vehicles	450
Running Expenses - Offices	150
Allowances	55
Buildings	9,356
	15,050

1970/71		1970/71
Personal Emoluments (Breakdown as above)		£24,561
Drivers, Labour, etc.		1,868
Running Expenses - Motor Vehicles		1,800
Allowances		352
Running Expenses - Offices		2,000
Maintenance - Houses		1,175
Survey Expenses		2,000
Part Cost of New Offices		15,000
		£48,756

(10) Provision of Marketing and Storage facilities

Funds have been vired for on-lending to F.M.B.

(11) Extension and Credit Services

Personal Emoluments

1 Senior Extension Officer (S9 CF.12)	479	£1,910
3 Senior Development Officers (STO/TO.III)	1,294	5,175
3 Development Officers (T.O./T.O.I/II)	676	2,704
10 Senior Technical Assistants (STA)	124	4,887
100 Field Assistants (T.A.)	2,992	19,287
11 Field Assistants (Credit) (T.A.)	401	1,758
50 Demonstrators	1,025	4,100
9 Field Assistants (Trainees)	250	999
	£7,241	£40,820

Extension

Drivers, Labour, etc.	1,684
Allowances	300
Running Expenses - Motor Vehicles	1,704
Field Housing and Offices	10,200
Housing Maintenance	300

Credit

Drivers	96
Allowances	60
Running Expenses - Motor Vehicles	138
Credit Collection - F.M.B.	100
Houses	11,699
	33,522

1970/71	
Personal Emoluments (breakdown as above)	40,820
Extension	
Drivers, Labour etc.	7,384
Allowances	1,130
Running Expenses - Motor Vehicles	7,356
- Field Offices	900
- Training Centre	300
Water Supply - Field Unit	750
Maintenance of Buildings	716
Field Units - Houses and Offices	35,000
Training Centre (New)	3,816
Training Centre Running Costs	2,258
Extension Running Costs	2,053
Experimental and Demonstration Work	3,000
Credit	
Allowances	240
Running Expenses (Motor Vehicles)	960
Stationery	300
Part Cost of New Offices	27,900
	133,983

(12) Management, Administration and Training	1st Quarter	1970/71
Personal Emoluments		
1 Chief Agricultural Development Officer(S6 GP.8)	550	2,200
1 Project Manager (S6 GP.8) (funded from Cat.(0-7)	-	-
1 Assistant Project Manager (S8) (Counterpart)	-	1,910
1 Senior Agricultural Administrative Officer (S9 GP.13)	478	1,910
1 Principal Accountant (S9 GP.12)	478	1,910
1 Agricultural Officer (P.O.) (Training)	447	1,785
4 Chief Technical Officers (CTO/TO.IV)	1,617	8,645
3 Senior Technical Officers	900	5,280
15 Technical Officers (T.O./T.O.I/II)	1,513	9,759
4 Chief Executive Officers (C.E.O./E.O.IV)	1,831	7,322
5 Senior Executive Officers (SEO/EC III)	803	6,810
15 Executive Officers (EO/EC.I/II)	780	7,290
6 Copy Typists (D5/6)	308	1,178
5 Senior Clerical Officers (SCO/C1)	-	2,440
49 Clerical Officers (CO/C2)	1,488	8,534
4 Shorthand Typists (D3/2)	774	4,000
11 Office Messengers/Watchmen (SC.III/IV)	132	927
	12,099	71,900
Jan-March, 1970		
Personal Emoluments (breakdown as above)	12,099	
Drivers	1,500	
Allowances	350	
Running Expenses - Motor Vehicles	500	
Running Expenses - Offices, Electricity, Water, Telephones etc.	3,374	
Stationery	300	
Running Expenses (Training School)	564	
Alterations to Offices and Maintenance	4,513	
Housing Contract	67,000	
	£90,200	
1970/71		
Personal Emoluments (breakdown as above)		71,900
Drivers, Labour, etc.		2,800
Allowances		4,500
Running Expenses - Motor Vehicles		2,040
Running Expenses - Offices		4,500
Stationery		1,239
Maintenance of Houses and Offices and Alterations		4,500
Training School Expenses		2,258
Field Training Expenses		850
Telephones for Headquarters Offices		250
Uniforms		150
Part Cost of New Offices and Houses (present estimate of total cost £121,300 subject to revision)		59,300
		154,287
(13) Project Evaluation and Planning		
Personal Emoluments		
1 Agricultural Economist (P.O.)	253	1,011
1 Development Officer (Evaluation) (T.O.)	314	1,243
2 Senior Evaluation Assistants (STA)	244	976
15 Evaluation Assistants (T.A.)	541	2,164
10 Development Assistants (Evaluation)	283	1,130
	1,635	6,524
Drivers, Labour, etc.	400	
Allowances	140	
Office Running and Stationery	124	
Computer Charges	400	
	£2,699	

sical Progress to end of 1969

	1968/69 Season	1969/70 Season
ayers		
Number of growers spraying	853	1,716
Machines in use	759	1,530
Acres Sprayed	2,681	5,301

ter: Aerial spraying is being carried out on about 250 acres on an experimental basis)

dit	1968/69	1969/70
Short term (insecticides)	£16,869	1,800 Loans
Medium term (sprayers)	4,998	775 Loans
TOTAL	£21,867	

(bad debts £1,514)

kets and Crop Storage facilities

Arrangements are being made for the Farmers Marketing Board to improve construct new markets on behalf of the project, and to provide additional ton storage at Bangula ginnery.

A total of 10 permanent and 5 temporary markets is involved.

ject Headquarters

Temporary offices are being used at Ngabu. Construction of permanent rters has been delayed by bad weather.

ff and Training

Staff recruitment is up to schedule. Limited staff and farmer training ntinues at the Ngabu Training Centre and construction is in hand to crease the capacity to allow 48 residential students to attend at the same e as 50 - 60 day students.

During 1969 135 courses were held.

Attendance was :	Men	2,196
	Women	1,169
	Staff	792

uses and Offices

Permanent houses :	Completed	34
	Under construction	33
	Not yet started	11
Low cost houses		132
Office	Under construction	
Workshop / Store	Completed	

hicles, Machinery and Equipment

Deliveries nearly up to schedule.

tension

	Total 1969
Individual visits	33,147
Demonstrations	8,539
Meetings	12,829
Radio listening groups	67,938
Mobile unit meetings	18,141
School visits	4,334
TOTAL attendance	144,928

Boreholes

Sited	75
Drilled	59
Productive	50

Roads

Under construction	107 miles
Completed	14 miles

Farm Planning

Target	15,000 acres
Of which: Initial Survey completed	13,200
In preparation	3,700
Completed	1,200

Associated Projects

The U.N.D.F. "Land and Water Resources Development" project also includes provision for a survey of the agricultural and irrigation potential of the whole Lower Shire Valley, a feasability report for the first stage of irrigation development in the Lower Shire Valley, and an irrigation demonstration area related to the first phase of irrigation development.

The feasability report is about to be completed, and the irrigation demonstration area has been established on the northern boundary of the IDA Rainfed Cotton Project Area, under the name of the "Kasindula Irrigation Project".

In association with the report on the potential for development of the whole Lower Shire Valley the UNDP commissioned from the World Health Organisation a survey to determine the requirements for health improvement. It is hoped that the latter will lead to measures to improve the health of all the people of the Valley, including those in the IDA Project Area, so that they can take full advantage of the new opportunities being given to them.

4. PROPOSED WORK 1970/73

The agreed programme of development, agricultural extension and credit will continue. Targets for the period are shown below:-

(i) Development	1970/71	1971/72	1972/73
Boreholes drilled and equipped	45	60	-
Roads constructed (miles)	80	-	-
Settlement Completed (acres)	4,000	4,000	3,000
Settlement planned (acres)	-	1,000	-
Houses completed (Units)	96	11	-
Other buildings completed (Units)	-	-	-

(ii) Extension and Credit			
Seed Cotton production (short tons)	10,200	12,200	13,600
Total Cotton acreage (acres)	36,500	38,300	40,400
Sprayed Cotton acreage (acres)	9,600	14,000	19,000
Number of Cotton Growers	17,500	18,000	19,000
Number of Growers Spraying	3,500	5,000	6,000
Number of Sprayers sold	1,500	1,500	1,000
Total Credit made available	81,000	108,000	120,000

On completion of the project the project area will be returned to the regular extension service of the Ministry of Agriculture.

5. JUSTIFICATION FOR PROPOSED WORK

This project will expand and stabilise production of cotton of a uniform quality known to have a good export and internal market. The project was appraised and approved by the International Development Association, from whom a loan was obtained.

6. EXECUTION AND SUPERVISION

The project is controlled by the Project Manager resident at Ngabu. General direction is by the Chief Agricultural Development Officer, who heads the Major Projects Division of the Ministry of Agriculture.

PROJECT SUBMISSION

LOWER SHIRE (SOUTH CHIKWAWA) RAINFED COTTON

Description of the Project, taken from the Development Credit Agreement made between the International Development Association and the Government of Malawi on 5 February 1968, entitled "Shire Valley Agricultural Development Project".

The Project is the implementation over five years of an integrated series of measures to increase the efficiency of agriculture in the Project Area and consists of the following:

I. The Provision of Agricultural Inputs and Credit in Kind and Improvements of Marketing and Storage Facilities. This includes:

(a) the provision of sprayers and insecticides and credits to farmers for such goods and the supervision of the use and collection of the credits;

(b) the construction and equipping of seven permanent produce markets; and

(c) the provision of a new crop storage facility with a capacity of about 540,000 cubic feet at the Bangula cotton ginnery.

II. The Provision of Project Management, Administrative Services and Staff Training. This includes:

(a) the establishment and staffing of a Project Organization at Ngabu within the Agricultural Development Branch of the Department of Agriculture;

(b) the recruitment of qualified managerial, professional, technical and administrative staff and the provision of in-service training;

(c) the construction, equipping and maintenance of houses and offices for Project staff in the Project Area;

(d) the purchase, operation and maintenance of vehicles, machinery and equipment;

III. The Provision of an adequate extension service to insure the dissemination of required technical knowledge leading to improved cultural practices and pest control.

IV. The Provision of Required Infrastructure in the Project Area. This includes:

(a) the drilling of about 156 working boreholes to be operated by hand pumps to supply potable water for domestic and farm use;

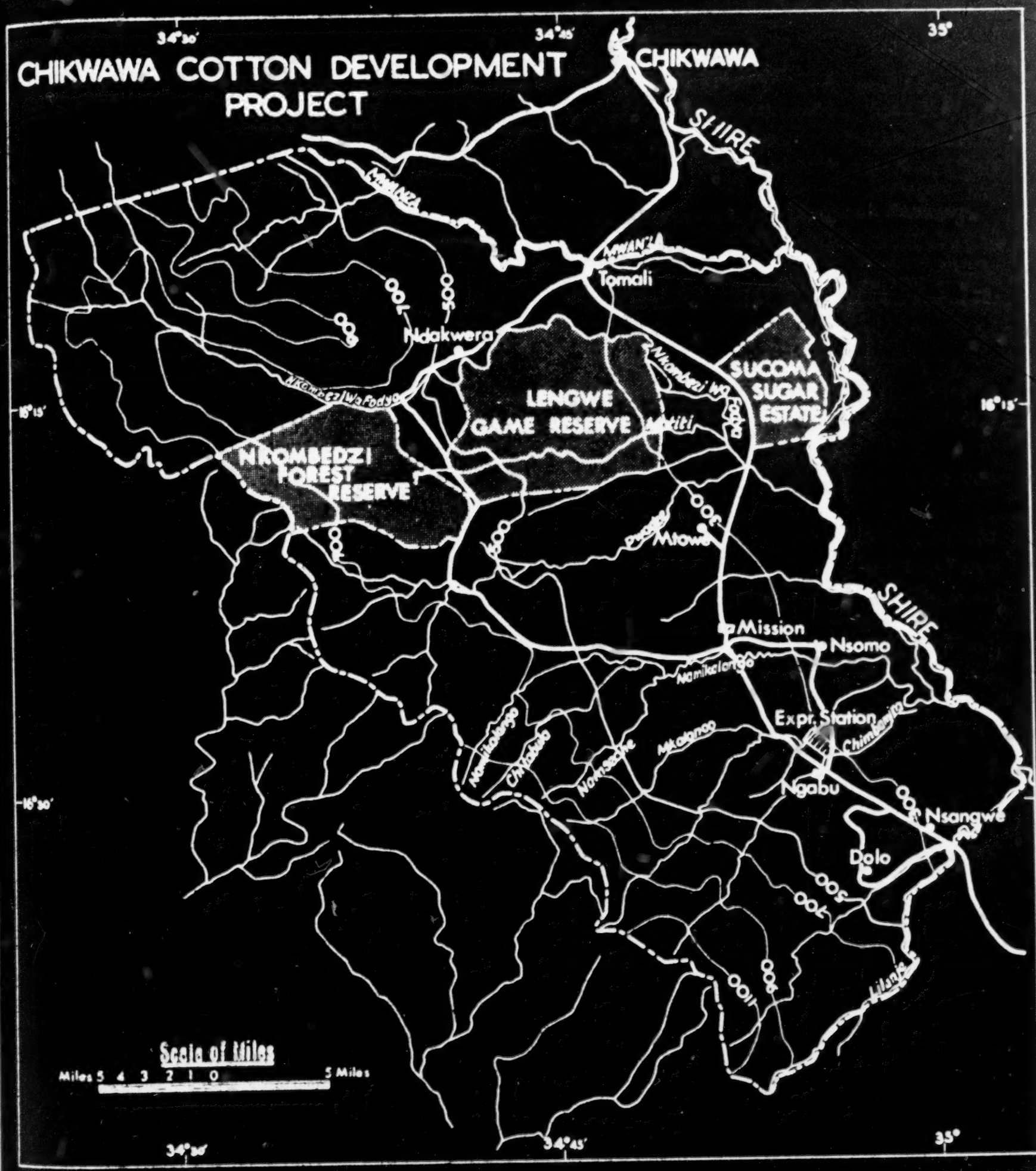
(b) the construction of about 160 miles of crop extraction roads and improvement of 24 miles of existing roads; and

(c) the demarcation of new plots on about 20,000 acres of arable land for settlement of new families.

* * *

The Project is expected to be completed by January 31, 1973.

CHIKWAWA COTTON DEVELOPMENT PROJECT



1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : SHIRE VALLEY AGRICULTURAL DEVELOPMENT PROJECT

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/MAJOR PROJECTS

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 29 (IDA)
HEAD 77 ITEM 68 (LOCAL)

1. PROJECT OFFICER

The Chief Agricultural Development Officer through the Project Manager.

2. FINANCIAL DETAILS

(a) Details of Expenditure

	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
IDA Category I						
(O-1) Buildings and Office Equipment	(1)	800	4,062	62,624	-	66,686
(O-2) Vehicles	(2)	2,000	1,900	10,700	-	12,600
(O-3) Well casings, fittings and pumps	(3)	-	-	4,000	-	4,000
(O-4) Sprayers and Insecticides	(4)	11,500	83,971	113,700	146,500	344,171
(O-5) Other Equipment	(5)	9,913	15,473	4,763	2,495	22,731
(O-6) Staff Salaries Foreign Exchange Cost	(6)	1,400	8,750	9,000	7,500	25,250
TOTAL IDA CATEGORY I		25,613	114,156	204,787	156,495	475,438
(O-7) Pest Control Extension & Credit	(7)	11,800	75,997	82,050	82,730	240,777
(O-8) Housing and Marketing Facilities	(8)	88,051	105,800	27,000	20,000	152,800
(O-9) Public Works and Equipment	(9)	37,450	185,400	43,440	8,640	237,480
(O-10) Unallocated		-	-	-	-	-
(O-11) Loan to F.M.B.		-	-	-	-	-
TOTAL IDA CATEGORY II		137,301	367,197	152,490	111,370	631,057
TOTAL PROJECT		162,914	481,353	357,277	267,865	1,106,495
Of which: I.D.A. Funds		114,259	350,958	300,907	226,385	878,250
Local Contribution		48,655	130,395	56,370	41,480	228,245

(b) Notes on Expenditure

General: Details of the programme in 1971/72 will depend on progress in 1970/71.

(1) Buildings and Office Equipment

Jan-Mar 1970

Filing Cabinets, typewriters, adding machines safes, etc. £800

1970/71

Office Equipment to furnish the new Ngabu Headquarters on completion £4,062

The farmers are members of the Young Pioneer Organisation, and there is a training base next door to the settlement. A Demonstration Unit for cotton is maintained as part of the Settlement Scheme and the whole scheme serves as an example for the trainees at the base of how to become an improved cotton grower.

This scheme was the first one undertaken by the Malawi Government and the experience gained has been extremely valuable in planning later schemes. There are already signs that the settlement is becoming a social unit integrated with the surrounding villages.

PROPOSED WORK 1970/73

For the next three years funds will be required for meeting the cost of maintaining a Technical Officer and a Development Assistant, who are attached to the scheme and for supporting the Demonstration plot attached to the scheme.

Expenditure on salaries will be reimbursed by Oxfam up to the end of 1972. The demonstration plot will be discontinued and extension work will be transferred to the regular district staff during 1972.

JUSTIFICATION FOR PROPOSED WORK

Supervision and demonstration are necessary at this stage in order to maintain work in an orderly fashion. If the settlers were to be left to work independently right away, there is a danger that they might lose morale and revert to traditional subsistence farming.

EXECUTION AND SUPERVISION

The scheme will be executed by the settlers under the direct supervision of the Technical Officer herein provided, and under the overall control of the Principal Settlement Officer, Ministry of Agriculture, assisted by the Young Pioneer Movement, to which the settlers belong.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : CHIKONJE COTTON GROWERS' SCHEME

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/TECHNICAL SERVICES

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEMS 33 AND 77

1. PROJECT OFFICER

Chief Agricultural Technical Services Officer through the Principal Settlement Officer.

2. FINANCIAL DETAILS

(a) Details of Expenditure

	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
8 Personal Emoluments					
1 Supervisor T.O.	132	536	557	435	1,528
1 Development Assistant	32	128	149	83	360
Labour	51	105	90	90	285
TOTAL OXFAM	215	769	796	608	2,173
9 Running Expenses					
Tools, materials and other expenses	130	264	264	134	662
TOTAL LOCAL	130	264	264	134	662
TOTAL PROJECT	345	1,033	1,060	742	2,835

(b) Notes on Expenditure

None.

(c) Import Content

See separate schedule for Ministry of Agriculture.

(d) Breakdown of Expenditure by Region

All expenditure in the Southern Region.

3. LOCATION OF CONSTRUCTION

Nil.

1970/71 DEVELOPMENT ESTIMATES

PROJECT SUBMISSION

PROJECT TITLE : BOREHOLE CONSTRUCTION - DANISH F.F.H.C.

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/PLANNING UNIT

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 34

RELATED PROJECTS : Cotton Development
Lower Shire Rainfed Cotton
Rural Water Supplies

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
3 Water Supplies	-	5,345	-	-	5,345
TOTAL	-	5,345	-	-	5,345

(b) Non-British, non-Malawi Expenditure

Not applicable

(c) Previous Expenditure

	£	Cumulative Total
To 31/12/67	17,855	17,855
1968 Actual Expenditure	17,855	35,710
1969 Printed Estimates (later revised upwards)	2,980	
1969 Revised Estimates	301	
1969 Estimated carry-forward	5,345	
Of which Jan/Mar 1970	-	
1970/71	5,345	

(d) Source of Finance

Danish Freedom From Hunger Campaign.

2. PROJECT TARGET

To drill boreholes in the Southern Region with preference given to areas in which cotton production can be expanded, but excluding the South Chikwawa area where the World Bank Rainfed Cotton Scheme is located.

Expected Completion Date: 31st March 1971.

3. BACKGROUND INFORMATION

This programme for the construction of boreholes for water supply in Southern Malawi is carried out under a grant by the Danish Board of Technical Co-operation with Developing Countries working through the F.A.O. Work commenced in the first week of June 1967 and by the end of the dry season (1968)73 boreholes had been drilled resulting in 66 successful wells. Total expenditure to the end of 1969 amounted to £35,011, thus leaving a balance of £5,345 to be spent in the 1970 dry season.

The wells are proving to be of great benefit to the people, providing potable water at convenient locations.

4. PROPOSED WORK 1970/73

It is proposed to complete the borehole drilling programme which was held up during 1969 because of the need to use the only available drilling equipment in the Central and Northern Regions of Malawi which are not covered under this grant.

5. JUSTIFICATION FOR PROPOSED WORK

The boreholes are proving to be of great benefit. They are located in settled agricultural areas on the basis of the number of people served, distance to the nearest water supply and whether the present water source is contaminated or not. A borehole serves on average five villages, benefitting seven to eight hundred people. Before this improvement women often had to travel two or three miles to obtain drinking water.

Apart from the convenience of a borehole the provision of clean water is a major factor in the improvement of health. Where there are no boreholes water is obtained from rivers, streams or open water holes, all of which are contaminated sources of supply.

The provision of convenient and adequate water supplies is also of immediate benefit to agriculture and permits the extension of the cotton spraying programme, resulting in a substantial increase in the output of this crop.

6. EXECUTION AND SUPERVISION

The administration of this programme is the responsibility of the Ministry of Agriculture. Borehole drilling is executed by the Geological Survey Department.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : BOREHOLE CONSTRUCTION - DANISH F.F.H.C.

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/PLANNING UNIT

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 34

1. PROJECT OFFICER

The Principal Planning Officer, Ministry of Agriculture, through the Director of Geological Surveys.

2. FINANCIAL DETAILS

(a) Details of Expenditure

	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
3 Water Supplies					
Boreholes	-	5,345	-	-	5,345
TOTAL	-	5,345	-	-	5,345

(b) Notes on Expenditure

The money will be used for drilling as many boreholes as possible. 16 borehole sites have been selected in the Southern Region and will be drilled by the Geological Survey Department in order of priority, while funds last.

(c) Import Content

See separate schedule for Agriculture.

(d) Breakdown of Expenditure by Region

All expenditure in the Southern Region.

3. LOCATION OF CONSTRUCTION

	Village	District	T.A.	Grid Reference
(1)	Kwalala II	Kasupe West	Msamala	233892
(2)	Corati	"	"	057117
(3)	Kuthambo	"	"	079071
(4)	Sanjama	"	"	713989
(5)	Bazale	"	"	163282
(6)	Misomali	"	"	YU 225463
(7)	Maleta	"	Kalembo	YU 324646
(8)	Malela-Mbwana	"	"	YT 328517
(9)	Salenya	Mlanje North	Nchumba	770580
(10)	Nangoma	"	Nkanda	528517
(11)	Mtendere Farm	Zomba	Malemia	430810
(12)	Machinjili	"	"	598145
(13)	Chonga	Blantyre	Symon	127048
(14)	Moffati	"	"	897878
(15)	Ngaiyaye	"	"	072027
(16)	Mpiri School	Fort Johnston	Makanjila	214842

1970/71 DEVELOPMENT ESTIMATES

PROJECT SUBMISSION

PROJECT TITLE : HOME ECONOMICS TRAINING FOR WOMEN

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/EXTENSION

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 35

RELATED PROJECTS : Farmer Training
Community Development Projects

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings*	-	1,100	-	-	1,100
5 Personal Emoluments	884	3,940	5,642	4,754	14,336
9 Running Expenses	360	1,480	1,674	1,316	4,470
TOTAL	1,244	6,520	7,316	6,070	19,906
*(a) Known, non-Malawi Expenditure if applicable	-	1,100	-	-	1,100

(c) Previous Expenditure

	£	Cumulative Total
1968 Actual Expenditure	-	-
1969 Printed Estimates	9,695	
1969 Revised Estimates	8,145	
1969 Estimated carry-forward	1,344	
Of which Jan-March 1970	1,244	
1970/71	100	

(d) Source of Finance

Oxfam

2. PROJECT TARGET

To train over a 4 year period a team of 35 women in home economics and agricultural practices so that they will be able to take up full-time employment within the Ministry of Agriculture as Homecraft Teachers. These Homecraft Teachers will be based at Farm Institutes and Training Centres where they will conduct courses for farmers' wives and rural women.

Expected Completion Date:

Oxfam grants terminate on 31st December, 1972.

3. BACKGROUND INFORMATION

Over the past five years a network of about 80 residential and non-residential training centres have been set up throughout Malawi by the Ministry of Agriculture, at which farmers and their wives are taught new methods of agriculture. Training of women in agriculture to Diploma and Certificate level started at Bunda College of Agriculture in 1967, but it will be some years before these women are available in the field. Homecraft Workers are at present trained by the Department of Community Development but the output is not sufficient to meet the needs of the Community Development/and the /Dept. Ministry of Agriculture. Experience has shown that Home Economics workers are most effective when based at Training Centres. There is an immediate need for female Homecraft Teachers to be associated with women's agricultural training programmes.

Phase I

PROJECT SUBMISSION

LAND REORGANIZATION - CENTRAL REGION

Description of the Project, taken from the Development Credit Agreement made between the International Development Association and the Government of Malawi on 5 February 1968, entitled "Lilongwe Agricultural Development Project".

The Project is the first four-year phase of the Lilongwe Development Program, a long-term program for the development of infrastructure and the improvement of smallholder agricultural production in the Program Area. The Project consists of the following:

I. Land Development. This includes, in about one-third of the Program Area:

(a) the preparation of detailed land use plans and the construction and maintenance of soil conservation and drainage works;

(b) the construction and maintenance of about 165 miles of crop extraction roads; and

(c) the drilling and maintenance of about 125 working boreholes, equipped with hand-operated pumps, for village water supply.

II. Land Reorganization and Registration. This includes:

(a) the establishment, staffing and equipping of a Survey Office in Lilongwe;

(b) the completion of aerial topographic surveys and the preparation of large-scale maps of the entire Program Area;

(c) the initiation of aerial cadastral surveys and the demarcation, reorganization and registration of holdings in part of the Program Area; and

(d) the establishment and staffing of a Land Registry Office in Lilongwe.

III. The Provision of Marketing and Storage Facilities. This includes:

(a) The construction and equipping of eleven markets within the Program Area; and

(b) the construction and equipping of a new 8,500 ton crop storage facility in Lilongwe.

IV. Extension, Supply and Credit Services. This includes: the provision of intensive agricultural extension services, fertilizer and other farm inputs, credit to farmers for such goods and the supervision of the use and collection of the credits in the one-third of the Program Area in which land development will be concentrated during the first phase.

V. The Provision of Program Management, Administrative Services and Staff Training. This includes:

(a) the establishment and staffing of an Agricultural Development Branch located in Lilongwe, within the Department of Agriculture;

(b) the establishment and staffing of a Program Organization under the Agricultural Development Branch with headquarters in Lilongwe;

(c) the recruitment of qualified managerial, professional, technical and administrative staff and the provision of in-service training;

(d) the construction, equipping and maintenance of houses and offices for Program staff in Lilongwe and in the Program Area;

(e) the purchase, operation and maintenance of vehicles, machinery and equipment; and

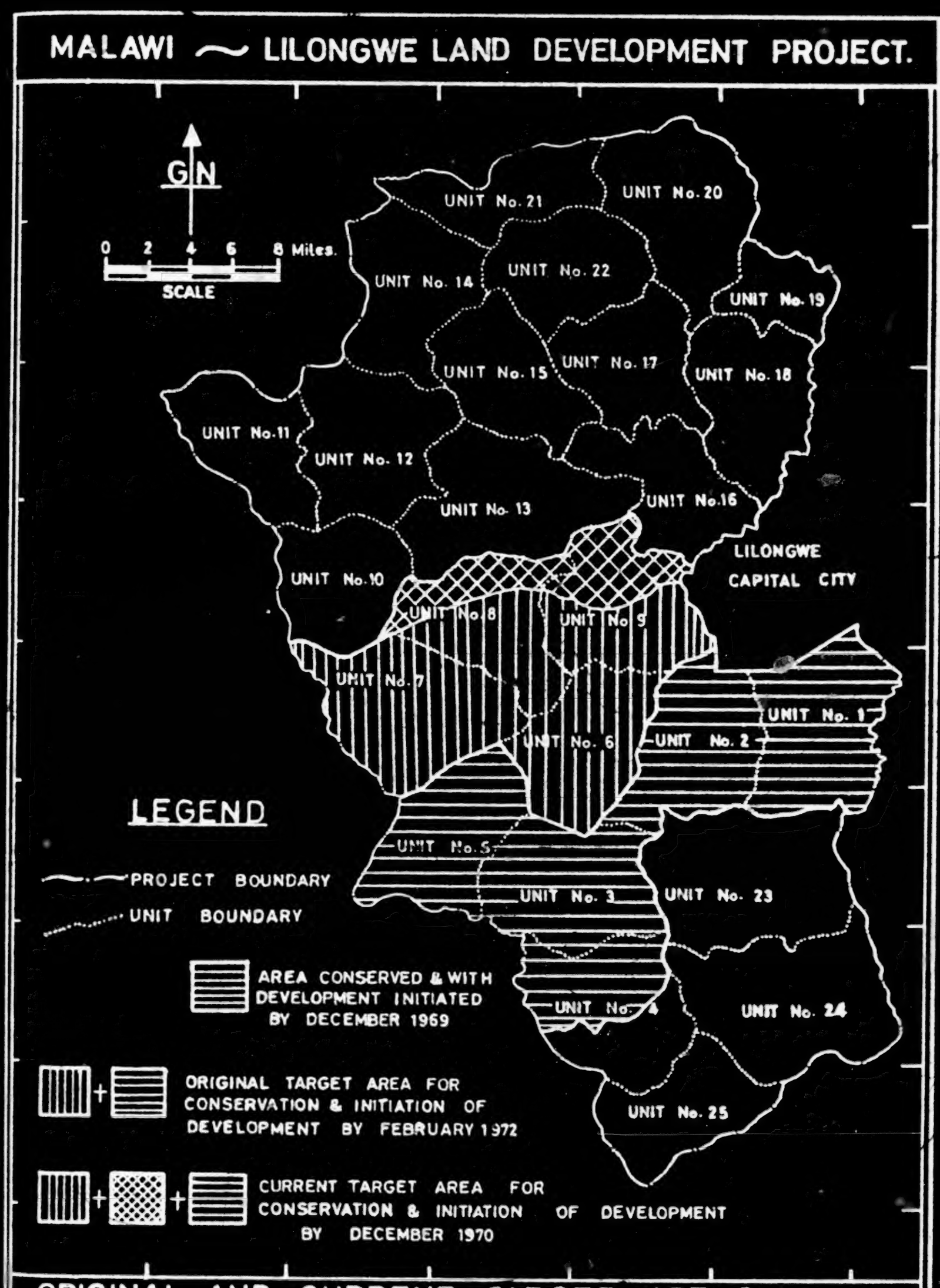
(f) the provision of administrative services.

VI. The review and evaluation and progress achieved under the Project and the preparation of detailed plans for subsequent phases of the Program.

* * *

The project is expected to be completed by January 1972.

MALAWI ~ LILONGWE LAND DEVELOPMENT PROJECT.



ORIGINAL AND CURRENT TARGET AREAS FOR CONSERVATION AND INITIATION OF DEVELOPMENT.

1970/71	
Personal Emoluments (breakdown as above)	£6,524
Drivers, Labour, etc.	755
Allowances	450
Running Expenses - Motor Vehicles	400
Office Running and Stationery	100
Computer Charges	100
Maintenance of Buildings	195
New Houses - CH.10 (Field)	3,800
	12,324

(14) Unallocated: Expected surplus available for Phase II

(15) Loan to F.M.B.

Jan-March 1970

Funds required by F.M.B. for construction of two markets in the Lilongwe Project area at £7,000 each £14,000

1970/71

Funds required by F.M.B. for construction of three markets in Lilongwe Project area at £7,000 =£21,000

Plus market improvement = 2,000 23,000

(c) Import Content

See separate schedule for Ministry of Agriculture.

(d) Breakdown of Expenditure by Region

All expenditure will be in the Central Region.

3. LOCATION OF CONSTRUCTION

Lilongwe town and Project area.

1970/71 DEVELOPMENT ESTIMATES
PROJECT SUBMISSION

PROJECT TITLE : SHIRE VALLEY AGRICULTURAL DEVELOPMENT PROJECT (Lower Shire South Chikwawa Rainfed Cotton Project)

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/MAJOR PROJECTS

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 29 (IDA)
HEAD 77 ITEM 68 (LOCAL)

RELATED PROJECTS : Lilongwe Agricultural Development Project
Salima Lakeshore Development Project
Cotton Development
Land and Water Resources

1. FINANCIAL SUMMARY

(a) Funds Requested (The Categories in this project are those agreed between the Malawi Government and the I.D.A.).

IDA Category I	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
(0-1) Buildings and Office Equipment	800	4,062	62,624	-	66,686
(0-2) Vehicles	2,000	1,900	10,700	-	12,600
(0-3) Well casings, fittings & pumps	-	-	4,000	-	4,000
(0-4) Sprayers and insecticides	11,500	83,971	113,700	146,500	344,171
(0-5) Other Equipment	9,913	15,473	4,763	2,495	22,731
(0-6) Staff salaries foreign exchange cost	1,400	8,750	9,000	7,500	25,250
TOTAL IDA CATEGORY I	25,613	114,156	204,787	156,495	475,438
IDA Category II					
(0-7) Pest Control Extension and Credit	11,800	75,997	82,050	82,730	240,777
(0-8) Housing and Marketing facilities	88,051	105,800	27,000	20,000	152,800
(0-9) Public Works and Equipment	37,450	185,400	43,440	8,640	237,480
(0-10) Unallocated	-	-	-	-	-
(0-11) Loan to F.M.B.	-	-	-	-	-
TOTAL IDA CATEGORY II	137,301	367,197	152,490	111,370	631,057
TOTAL PROJECT	162,914	481,353	357,277	267,865	1,106,495
Of which: I.D.A. Funds	114,259	350,958	300,907	226,385	878,250
Local Contribution	48,655	130,395	56,370	41,480	228,245

Note

Categories (0-1) to (0-6) inclusive are 100% reimbursable from the Loan.
Categories (0-7) to (0-9) inclusive are 65% reimbursable from the Loan.

(b) Non-British, Non-Malawi Expenditure

Subject to IDA Procurement Regulations.

(c) Previous Expenditure

	£	Cumulative Total
A. LOAN		
To 31/12/68	34,536	34,536
1969 Printed Estimates	546,434	
1969 Revised Estimates	383,700	
1969 Estimated Carry-forward	162,734	
Of which Jan-March 1970	114,259	
1970/71	48,475	
B. LOCAL CONTRIBUTION		
To 31/12/68	9,289	9,289
1969 Printed Estimates	193,616	
1969 Revised Estimates	91,015	
1969 Estimated Carry-forward	102,601	
Of which Jan-March 1970	48,655	
1970/71	53,946	
Total Expenditure on the Project from commencement in February 1968 to 31/12/69	-	£518,540

Note: Local Contribution is liable to increase if full reimbursement is not obtained from claims against IDA for Category I expenditure.

(d) Source of Finance

	1968	1969	Jan-Mar 1970	1970/71	Residual	TOTAL PROJECT
IDA Funds	34,536	383,700	114,259	350,958	658,210	1,541,663
Local Contribution	9,289	91,015	48,655	130,395	80,246	359,600
TOTAL PROJECT	43,825	474,715	162,914	481,353	738,456	1,901,263

The I.D.A. Credit is for $3,700,000, which equals approximately £M1.54 Million

2. PROJECT TARGET

The Credit Agreement between the Malawi Government and the International Development Association states the purpose of the project as follows :-

"The Project is the implementation over five years of an integrated series of measures to increase the efficiency of agriculture in the Project Area and consists of the following :-

1. The provision of agricultural inputs and credit in kind and improvement of marketing and storage facilities.

2. The provision of project management, administrative services and staff training.

3. The provision of an adequate extension service.

4. The provision of required infrastructure in the Project Area"

The full text of the Description of the Project is appended.

Expected Completion Date

Under the Credit Agreement the project is expected to be completed by January 31st 1973.

3. BACKGROUND INFORMATION

Immediately after Independence in 1964 the United Nations Development Programme commenced a Special Fund Project called "Land and Water Resources Development, Southern Malawi". This Project resulted in the grant of a Credit by the International Development Association in February 1968 for the Shire Valley Agricultural Development Project (Chikwawa Rainfed Cotton Development).

The project uses experience gained by the Malawi Government Department of Agriculture over a number of years from 1955 onwards in the encouragement of improved and more intensive methods of cotton production in Chikwawa District.

The project area is located in the Lower Shire Valley of the Southern Region. The total area is about 500,000 acres; the Lengwe Game Reserve and the Sucoma Sugar Estate occupy some 45,000 acres. There are about 100,000 acres of land suitable for rainfed arable cropping. The total population of the area is about 78,000 and there are about 15,000 farms. In 1967/68, before the project started, farmers planted about 40,000 acres of cotton and 45,000 acres of food crops and produced 3,400 tons of seed cotton.

The principal aim is to increase cotton production within a fully integrated agricultural and rural development plan. It is intended that cotton production should increase to a steady output of 13,600 tons by 1972/73.

The average yield throughout the country is normally about 300 lbs. of seed cotton per acre. It is planned to encourage 4,000 - 5,000 farmers in the project area regularlly to spray the crop with insecticide and increase their yields to about 1,000 lbs. per acre, providing additional gross returns of approximately £15 per acre.

The production targets aimed at are set out in the following table, and compared with the years immediately preceding the project.

Cotton Production Targets & Achievements

Year of Project Crop Year	-3 64/65	-2 65/66	-1 66/67	0 67/68	1 68/69	2 69/70	3 70/71	4 71/72	5 72/73
TARGETS (Revised)									
Acreage ('000 acres)									
Sprayed				.5	2.6	5.4	9.6	14.0	19.0
Unsprayed				40.5	31.4	30.3	26.9	24.3	21.4
TOTAL				41.0	34.0	35.7	36.5	38.3	40.4
Production ('000 tons)									
Sprayed				.2	1.3	2.6	4.8	7.0	8.5
Unsprayed				3.2	6.2	5.8	5.4	5.2	5.1
TOTAL				3.4	7.5	8.4	10.2	12.2	13.6
ACHIEVEMENT									
Acreage ('000 acres)									
Sprayed	.04	.4	.9	.6	2.7				
Unsprayed	42.0	44.2	44.3	40.4	41.7				
TOTAL	42.0	44.6	45.2	41.0	44.4				
Production ('000 tons)									
Sprayed	.03	.1	.4	.3	1.7				
Unsprayed	11.9	4.7	3.7	3.2	5.8				
TOTAL	11.9	4.8	4.1	3.5	7.5				

(3) Vehicles

Jan-Mar 1970

5 ton tipper truck £2,000

1970/71

2 S.W.B. Landrovers @ £950 each £1,900

(3) Well casings, fittings and pumps

The stocks on hand are sufficient for Jan-Mar 1970 and 1970/71.

(4) Sprayers and Insecticides

Jan-Mar 1970

Provision to meet freight and agency charges on 1,000 Knapsack Sprayers delivered in late 1969. £11,500

1970/71

1,500 Knapsack Sprayers at approximately £21.6.8d £32,000

Insecticides	£47,521	
Water Tanks	£ 700	
Aerial Spraying	£ 3,750	£83,971

(5) Other Equipment

Jan-Mar 1970

Land Development Equipment	£540	
Survey Equipment	100	
Training Equipment	850	
Credit Services Equipment	550	
Workshop Equipment	625	
Electrical Installation Equipment	6873	
Research and Demonstration Equipment	250	
Small Tools	125	£9,913

1970/71

Land Development Equipment	£2,000	
Survey Equipment	250	
Training Equipment	2,000	
Credit Services Equipment	3,000	
Workshop Equipment	3,000	
Electrical Installation Equipment	1,000	
Research & Demonstration Equipment	2,000	
Small Tools	223	
Portable Housing	2,000	£15,473

(6) Staff Salaries, Foreign Exchange Cost

Jan-Mar 1970

Based on charges for five expatriate officers £1,400

1970/71

Based on eight expatriate officers £8,750

(7) Pest Control Extension and Credit

Personal Emoluments

1 Project Manager (S8)	£ 500	£2,000
1 Agricultural Officer (P.O.)	254	1,016
1 Assistant Project Manager (CTO/TO 4)(Counterpart)	-	1,339
1 Principal Field Officer (CTO/TO 4)	398	1,591
1 Chief Executive Officer (CEO/EO 4)	508	2,030

Personal Emoluments - Cont'd		
4 Senior Field Officers (STO)	£1,024	£5,892
6 Field Officers (T.O.)	378	3,022
1 Executive Officer (E.O.)	180	720
2 Senior Field Assistants (STA)	124	990
32 Field Assistants (T.A.)	1,430	5,543
1 Foreman Mechanic (T.A.)	80	318
1 Shorthand Typist (D3/2)	-	640
8 Clerical Officers (C.O.)	258	1,485
1 Copy Typist (D5/6)	49	193
Development Assistants		
135 Development Assistants (Trainees) @ £117 p.a. average	2,487	15,795
	7,670	42,574
Drivers, Mechanics, Labour, etc.	1,031	
Allowances	450	
Running Expenses - Motor Vehicles	1,800	
- Training Centre	550	
- Offices	200	
- Laboratory	99	
	£11,800	

1970/71

Personal Emoluments (Breakdown as above)	42,574
Drivers, Mechanics, Labour, etc.	10,740
Allowances	3,845
Running Expenses - Motor Vehicles	10,500
- Training Centre	3,248
- Offices	2,000
- Laboratory	1,590
- Credit System	1,500
	£75,997

(8) Housing and Marketing Facilities

Jan.- Mar 1970

Improvement to Markets	4,600
Field Housing (Junior Staff)	26,000
Equipment (workshops etc.)	22,401
Headquarters Housing (All Grades)	18,000
Workshops, Offices and Stores	12,000
Temporary Houses, Rents, etc.	5,050
	£88,051

1970/71

Markets (1 New Market and Improvements)	15,000
Field Housing (Junior Staff)	35,800
Equipment (workshops etc.)	16,000
Headquarters Housing (All Grades)	20,000
Workshops, Offices, and Stores	2,000
F.M.B. Housing (10 EL.2 Houses)	13,000
Carry-Forward from 1969 Programme	4,000
	105,800

(9) Public Works and Equipment

Jan-Mar 1970

Construction of Roads	£26,350
Maintenance of Roads	2,000
Construction of Boreholes	5,200
Maintenance of Boreholes	-
Maintenance of Buildings	500
Headquarters Water Scheme	2,500

(9) Public Works and Equipment - Cont'd

	£
Settlement Costs	900
	£37,450

1970/71

Construction of Roads	£128,900
Maintenance of Roads	10,000
Construction of Boreholes	31,500
Maintenance of Boreholes	1,500
Maintenance of Buildings	1,500
Settlement Costs	7,000
Carry-Forward from 1969 Programme	5,000
	£185,400

(c) Import Content

See separate schedule for Ministry of Agriculture.

(d) Breakdown of Expenditure by Region

All expenditure will be in Southern Region.

3. LOCATION OF CONSTRUCTION

All construction will be within the Project Area.

1970/71 DEVELOPMENT ESTIMATES
PROJECT SUBMISSION

PROJECT TITLE : CHIKONJE COTTON GROWERS' SCHEME

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/TECHNICAL SERVICES

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEMS 33 AND 77

RELATED PROJECTS : Settlement Branch

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
8 Personal Emoluments(OXFAM)	215	769	796	608	2,173
9 Running Expenses (LOCAL)	130	264	264	134	662
TOTAL	345	1,033	1,060	742	2,835

(b) Non-British, Non-Malawi Expenditure

Not applicable.

(c) Previous Expenditure

	£	Cumulative Total
To 31/12/67	6,532	6,532
1968 Actual Expenditure	1,214	7,746
1969 Printed Estimates	1,006	
1969 Revised Estimates	1,006	
1969 Estimated Carry-forward	Nil	

(d) Source of Finance

Personal Emoluments - Oxfam

Running Expenses - Malawi Government Local Resources.

2. PROJECT TARGET

To provide for the cost of supervision and demonstration on the Chikonje Settlement Scheme which was set up in 1967 to provide a demonstration nucleus of improved cotton growers near the Young Pioneer Base at Chiromo, Nsanje District. The growers are members of the Young Pioneer movement.

Expected Completion Date: OXFAM contribution ceases December 1972. Running costs will be absorbed into the Settlement Branch Project.

3. BACKGROUND INFORMATION

The scheme has been planned and executed in conjunction with Oxfam.

Land has been found and laid out for a settlement of 22 farmers each with a 12 acre holding. The crops to be grown eventually on each holding area are 6 acres of sprayed cotton and 2 acres of foodcrops each year, the rest of the holding being farmstead, trees and fallow. 6 acres of arable land on each holding were cleared for cotton and food crops in the 1968/69 season and all housing has been constructed. Cotton yields averaged 1,082 lbs. The best farmer received an income of £167 from his cotton.

The aim of the programme is :-

(a) to increase the efficiency of rural women in their household tasks,

(b) to increase their understanding of nutrition,

(c) to increase their understanding of basic agricultural practices.

4. PROPOSED WORK 1970/73

It is proposed that a team of 35 Homecraft Teachers be trained through four annual 12-month courses. The first course ended in December 1969 and 19 instructresses are now at training centres. The courses are conducted at Tuchila Farm Institute. Each course comprises 20 Homecraft Teachers, but due to an annual "wastage" through marriage it is expected that it will take four years to train a full complement of 35 Homecraft Workers. Each course runs from January to December each year, the final portion consisting of a period of field training.

Year	1969	1970	1971	1972	1973
New Trainees	20	20	20	20	-
Less "Wastage"	5	10	15	15	-
TOTAL EMPLOYED	-	15	25	30	35

A policy of giving preferance to the recruitment of extension staff wives should reduce the rate of "wastage". It is proposed to employ the additional instructresses above the 35 covered by Oxfam funds from alternative sources.

5. JUSTIFICATION FOR PROPOSED WORK

The Ministry of Agriculture is becoming increasingly aware of the importance of women in its extension programme. A great deal of the agricultural work carried out in Malawi is done by women; with a man-based extension service the effectiveness of the extension contacts has not been as high as it could have been. In addition to their agricultural duties women carry out all the normal functions of rearing children and running a home. For this reason any training programme must combine teaching in agriculture with home economics. The rural women of Malawi have already demonstrated their desire to learn improved practices by attendance at demonstrations, meetings and formal training courses.

The training will have the side effect of increasing the desire of rural women for consumer durables such as household goods, clothes and furniture, and so tend to bring them into the cash economy, which in turn will have an influence on cash crop production.

6. EXECUTION AND SUPERVISION

The project will be executed by the Extension Branch of the Ministry of Agriculture.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : HOME ECONOMICS TRAINING FOR WOMEN

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/EXTENSION

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 35

1. PROJECT OFFICER

The Chief Agricultural Extension Officer through the Training Officer, Southern Region.

2. FINANCIAL DETAILS

(a) Details of Expenditure	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings (M)						
Houses for homecraft teachers	(1)	-	1,100	-	-	1,100
8 Personal Emoluments						
Student allowances	(2)	120	480	480	360	1,320
Salaries for homecraft teachers	(3)	559	2,640	4,342	3,779	10,761
Allowances for homecraft Instructor (V.S.O.)	(4)	160	640	640	480	1,760
Allowances for homecraft Instructor (U.N. Associate Expert)	(4)	-	-	-	-	-
Driver		45	180	180	135	495
		884	3,940	5,642	4,754	14,336
9 Running Expenses						
Food for homecraft teachers in training	(5)	140	560	560	420	1,680
Training Materials	(6)	45	180	180	135	540
Transport and Travelling	(7)	75	290	484	411	1,260
M. & R.E.	(8)	100	450	450	350	1,350
		360	1,480	1,674	1,316	4,470
TOTAL		1,244	6,520	7,316	6,070	19,906

(M) Costed for construction by Ministry of Agriculture.

(b) Notes on Expenditure

(1) Houses for Homecraft Teachers

The houses are being built at Farm Institutes and Training Centres to which the Homecraft teachers will be posted, at an approximate cost of £400.

(2) Student Allowances

These are paid to the trainees whilst attending training course. The rate is £2 per head per month.

(3) Homecraft Teacher Salaries

Upon successful completion of training teachers are employed as Technical Assistants on the scale £149 x 11 per annum.

The provision anticipates a heavy rate of wastage as is inevitable with young female staff. If surplus teachers become available they will be employed from the general extension service funds.

(4) Homecraft Instructors (V.S.O. and Associate Expert)

There is a V.S.O. Instructor to assist in the training of Homecraft Teachers. Provision for her allowance of £640 a year is included in the scheme. A U.N. Associate Expert assists the U.N. Home Economics Expert attached to the Community Development Department in providing active advice and guidance both to the V.S.O. at Tuchila and to the workers actually in post at the Farm Institute and Training Centres.

(5) Food for Homecraft Teachers in Training

Provision is made at the official rate of 2/- a head per day for 280 days, or £560 for 20 trainees for a year.

(6) Training Materials

At £9 a head - £180 per annum. This item covers stationery and cooking equipment which will be required by the Homecraft Teachers whilst undergoing training. After training they will be required to make use of facilities which already exist at Farm Institutes and Training Schools.

(7) Transport and Travelling

(a) The Homecraft Instructors who are provided with a Landrover.

(b) Bus fares will be required for prospective Homecraft Teachers on interview, for vacations and on initial posting.

(c) After appointment as Homecraft Teachers cycle allowances and holiday grants will be payable at £13.5 per Homecraft Teacher per annum.

(c) Import Content

See separate schedule for Ministry of Agriculture.

(d) Breakdown of Expenditure by Region

	Jan-Mar 1970			1970/71			1971/72			1972/73		
	S	C	N	S	C	N	S	C	N	S	C	N
2 Buildings	-	-	-	500	400	200	-	-	-	-	-	-
6 Plant and Vehicles	-	-	-	-	-	-	-	-	-	-	-	-
8 Personal Emoluments	548	224	112	2356	1056	528	3036	1736	870	2486	1512	756
9 Running Expenses	333	18	9	1306	116	58	1383	194	97	1069	165	82
TOTAL	881	242	121	4162	1572	786	4419	1930	967	3555	1677	838

Based on staff in ratio of 2:2:1 between S.C. and N. Regions respectively.

3. LOCATION OF CONSTRUCTION

To be constructed by Ministry of Agriculture at sites to be selected.

1970/71 DEVELOPMENT ESTIMATES

PROJECT SUBMISSION

PROJECT TITLE : VILLAGE GRAIN STORAGE PROJECT

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/RESEARCH

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 36

RELATED PROJECTS : Maize and Groundnut
Agricultural Research Services
UNDP Seed Industry Development Project

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings*	500	-	-	-	-
7 Other Equipment	-	2,136	-	-	2,136
8 Personal Emoluments	618	2,240	2,937	-	5,177
9 Running Expenses	1,780	2,995	1,425	-	4,420
9-10 Special Expenditure	400	1,600	1,070	-	2,670
TOTAL	3,298	8,971	5,432	-	14,403
*21 Houses		-	-	-	-
22 Other Buildings		-	-	-	-

(b) Non-British, non-Malawi Expenditure

Not applicable.

(c) Previous Expenditure

	£	Cumulative Total
To 31/12/67	-	-
1968 Actual Expenditure	Nil	Nil
1969 Printed Estimates	9,018	
1969 Revised Estimates	6,134	
1969 Estimated carry-forward	2,884	
Of which Jan-Mar 1970	2,884	

(d) Source of Finance

Oxfam / A local contribution by the F.M.B. to Government share met from Revenue Account.

2. PROJECT TARGET

To decrease losses and deterioration of cereal and legume grains in farmers' stores (Nkhokwe), and in Central Storage Depots.

Expected Completion Date:

Oxfam support ends in 1972. Results then incorporated in Extension Programme.

3. BACKGROUND INFORMATION

The traditional type of grain storage bin in Malawi is the Nkhokwe, a cylindrical basket set on a platform of mudded laths which is itself raised off the ground on stilts and covered with thatch during the rains. Maize is usually stored on the cob and with the sheath leaves still intact while groundnuts are stored in shell. In most years there are surpluses which the farmers sell to the Farmers Marketing Board. Purchased grain is stored in bags at the main depots until it can be exported.

There is a high incidence of pests and diseases, and in more densely settled areas the infestation is maintained and increased by transfer from village to field and back as a result of poor crop sanitation in both spheres. Besides the losses caused by insects, rats can cause a lot of damage along the lakeshore in the Northern Region. Wastage in store is thought to be as high as 15% to 20%.

High yielding varieties of maize, now being grown on an increasing scale, are more prone to storage losses through pests than are the low yielding traditional types. Some farmers already use D.D.T. dust in their nkhokwes, but the practice is not widespread. The damage caused by insects and rodents brings forth an urgent need to study the use of insecticides both from the point of view of the kind to use and the method of application, as well as the steps required to ensure their adoption by the farmers. There is also the question as to whether the traditional way of storage in nkhokwes will still be suitable when the yield per acre increases and varieties of maize more succeptible to insect damage are widely grown.

The F.M.B. has a keen interest in improving grain storage techniques not only at its depots and in transit to overseas markets, but also at the source of primary infestation i.e. village. Thus the F.M.B. has made a grant of money to the University of Malawi for establishment of a Stored Products Research Unit on which nucleus the Village Grain Storage Project is built. An F.M.B. grant supplements the Oxfam project here described. The Government contributes the services of two counterpart staff paid from Revenue Account and the assistance of the Extension Service.

The present requirement in Malawi in reducing wastage in village stores is threefold added to which is the specific requirement of the Farmers Marketing Board:-

(a) a sample survey to determine the extent of the wastage under existing storage methods, particularly of maize and groundnuts. Assistance will be provided by the National Statistical Office, the Farm Management Survey Team and the Extension Staff of the Ministry of Agriculture;

(b) the determination of an effective and economic method of reducing this wastage by improved sanitation, better container design and the use of insecticides;

(c) the production, with the help of the Extension Aids Section, of material in the shape of pamphlets, film and tape so as to enable the Extension Service to mount an effective campaign against storage losses; and

(d) the improvement of the Farmers Marketing Board's techniques of pest control at its depots and in transit from producer to ultimate consumer, including the training of more highly skilled pest control teams.

4. PROPOSED WORK 1970/73

To continue working on the specific problems of F.M.B. viz :-

(a) investigation into techniques for controlling cadra cautella in the main F.M.B. depots and warehouses;

(b) the running of training courses to improve the efficiency of pest control spray teams;

(c) investigation into the losses that occur in rail transit between the main depots and the sea port, and in transit by sea from port to overseas consumer;

(d) further study of air warehouses with a view to developing smaller versions (20-50 ton capacity) of the type so far tried, for use at intermediate collecting points (i.e. market centres as opposed to depots).

Concurrently with the work for the F.M.B., the staff running the project will carry out an orientation survey throughout Malawi. This will bring them into contact with as many Extension and Training Officers as possible. They will also begin collecting information from as many areas as possible about cereal storage and the factors affecting deterioration and losses of grain.

On returning from the orientation tour, the team will embark on the following programme:

(i) They will devise a survey technique for the measurement of storage losses, working with samples drawn with the assistance of N.S.O. and measured with the help of the Farm Management Survey team and field staff of the Ministry of Agriculture.

(ii) With the assistance of the Extension Aids Section and the Agricultural Training Organisation, the team will prepare material for, and help to run, a series of short courses for extension workers on store hygiene and the use of insecticides in the villages.

(iii) The team will intensify and expand the search for better store designs from cheap local materials and more effective, safe and economic insecticidal treatments. Close liaison will be maintained with the Government Plant Breeder at Chetedze and the Government Entomologist at Bvumbwe Experimental Station.

Finally the team will prepare a report assessing the progress achieved and giving advice upon the way in which the project should be followed up by the permanent Agricultural Research and Extension Services.

5. JUSTIFICATION FOR PROPOSED WORK

Reducing wastages and losses is one of the five areas of concentration recommended by F.A.O. for Agricultural Development and this project aims at that.

6. EXECUTION AND SUPERVISION

The project is executed by the University Research Entomologist Dr. Schulten as Project Leader in close cooperation with Dr. Westwood, the Grain Storage Specialist provided by Oxfam, under the guidance of the Chief Agricultural Research Officer.

4. PROPOSED WORK [illegible]

To continue working on the [illegible]

(a) investigation into techniques for [illegible] main W.M.B. depots and warehouses;

(b) the running of training courses to improve the efficiency of control spray teams;

(c) investigation into the losses that occur in mail transit between the main depots and the sea ports, and in transit by sea from port to overseas consumer;

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : VILLAGE GRAIN STORAGE PROJECT

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/RESEARCH

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 36

1. PROJECT OFFICER

Dr. Schulten (Research Entomologist).

2. FINANCIAL DETAILS

(a) Details of Expenditure	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings						
Office and Laboratory(W)	(1)	500	-	-	-	-
7 Other Equipment						
Equipment	(2)	-	100	-	-	100
Publicity Equipment and Materials	(3)	-	2,036	-	-	2,036
		-	2,136	-	-	2,136
8 Personal Emoluments						
Storologist		618	2,240	2,937	-	5,177
9 Running Expenses						
Subsistence and Travelling Allowances	(4)	225	900	300	-	1,200
M. and R.E.	(5)	225	900	300	-	1,200
Pesticides	(6)	30	570	400	-	970
Publicity	(7)	200	375	375	-	750
Orientation tours	(8)	1,000	-	-	-	-
Miscellaneous		100	250	50	-	300
		1,780	2,995	1,425	-	4,420
9-10 Special Expenditure						
Housing Rent for Storage Specialitst and Research Entomologist	(9)	400	1,600	1,070	-	2,670
TOTAL		3,298	8,971	5,432	-	14,403

(W) = As costed for construction by Ministry of Works and Supplies.

(b) Notes on Expenditure

(1) Office and Laboratory at Bvumbwe Experimental Station to permit experimental village type storage.

(2) Equipment for the laboratory required for storage problems.

(3) In league with the Extension Aids Section, the team will issue pamphlets, films and tapes in order to mount an effective propaganda campaign against storage losses.

(4) Allowances to be paid to the team while on the orientation survey.

(5) Maintenance and repairs to the team's two landrovers at £450 per annum

(6) Pesticides required for experiments on effective methods of combating insects, etc.

(7) Much publicity will be required in order to enlist the cooperation of the villagers.

(8) Orientation tours by Dr. Schulten and Dr. Westwood to neighbouring countries to study storage problems.

(9) Rent for housing for Grain Storage Specialist (£1,000 per annum) and one counterpart (Research Entomologist)(£600 per annum).

(c) Import Content

See separate schedule for Ministry of Agriculture.

(d) Breakdown of Expenditure by Region

Nearly all expenditure will be in the Southern Region.

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3. LOCATION OF CONSTRUCTION

The Office/Laboratory block will be sited at Bvumbwe Agricultural Experimental Station.

1970/71 DEVELOPMENT ESTIMATES

PROJECT SUBMISSION

PROJECT TITLE : LOCAL COSTS - TAIWAN TECHNICAL ASSISTANCE

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/TECHNICAL SERVICES

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 62

RELATED PROJECTS : Irrigation Branch
Settlement Branch

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings*	-	1,000	1,150	1,150	3,300
5 Other Construction	200	1,200	1,200	1,200	3,600
6 Plant and Vehicles	-	4,200	4,500	4,500	13,200
8 Personal Emoluments	2,950	9,750	9,950	9,950	29,650
9 Running Expenses	1,850	5,850	5,200	5,200	16,250
TOTAL	5,000	22,000	22,000	22,000	66,000
*21 Houses		-	950	950	1,900
22 Other Buildings		1,000	200	200	1,400

(b) Non-British, non-Malawi Expenditure

Not applicable.

(c) Previous Expenditure

	£	Cumulative Total
To 31/12/66	21,003	21,003
1967	7,599	28,602
1968 Actual Expenditure	18,719	47,321
1969 Printed Estimates	21,767	
1969 Revised Estimates	21,767	
1969 Estimated Carry-forward	-	

(d) Source of Finance

Local Resources.

2. PROJECT TARGET

This project aims to provide the local support in fulfillment of the Malawi Government's obligation under the Agreement, First Protocol and Second Protocol with the Republic of China for the technical assistance teams now in Malawi.

Expected Completion Date:

This project continues as long as the Protocols remain in force. When the Chinese Technical Assistance programme is completed the local costs for irrigation rice schemes will be borne by the Irrigation Branch.

The Project has four main elements :-

(a) An Agric. Development Project for Lilongwe

(b) A Dryland Agric. Development Project for the Lower Shire Valley

(c) A Feasability Report for Irrigation Development in the Lower Shire Valley

(d) An Irrigation Demonstration Unit.

The first two elements have already resulted in the IDA Lilongwe Agricultural Development Project and the IDA Chikwawa Rainfed Cotton Development Project respectively.

The third element - a feasability report for irrigation development - has been carried out under contract to the UNDP (through FAO) by Lockwood Survey Inc. of Canada. Work started in 1966 and the reports provided for in the contract are due to be delivered by 1st April 1970. These reports are a general survey of the irrigation potential of the whole of the Lower Shire Valley, together with a detailed plan and estimate for an initial 22,000 acre irrigation scheme in such a form that it can be submitted for international finance.

A project submission for a 3,200 acre irrigation scheme in the Kasindula area was tabled at the end of 1968 at a meeting of the contractors with officials of UNDP and the Malawi Government. As a result of this meeting the Lockwood contract was extended to March 1970, so as to enable a soil survey to be undertaken of the whole Lower Shire Valley, and so as to allow the 3,200 acre scheme so far devised to be expanded to a minimum/at least 10,000 acres as originally prescribed.

Kasindula Pilot Irrigation Project

The fourth element of the Land and Water Resources Project - an irrigation demonstration area of not less than 500 acres related to the first phase of irrigation development - is being undertaken by the Malawi Development Corporation, and is known as the Kasindula Project. A map and brief description is attached to show its location in relation to the project in general.

Health Improvement

The U.N.D.P. Project includes provision to determine the requirements for health improvement of the Lower Shire Valley related to irrigation and agricultural development. The UNDP (through F.A.O.) commissioned the World Health Organisation to carry out an initial survey, and this took place in August 1968. The report was received by the Malawi Government in February 1970, and recommends that in order to make a thorough study additional public health consultants should be provided, and a twelve month socio-economic survey should be carried out.

It is intended that the financing proposals for future development projects in the Lower Shire Valley should include provision for additional basic health facilities so that the health of the people of the area can be improved sufficiently to permit them to make use of the opportunities given them by the investment in agricultural improvements.

4. PROPOSED WORK 1970/73

The reports provided for in the project will be received and studied during 1970 and it is hoped that they will be followed by appraisal missions with a view to obtaining external finance for a major scheme.

5. JUSTIFICATION FOR PROPOSED WORK

The survey is to show whether or not the irrigation potential of the Lower Shire Valley can be economically developed at the present time.

6. EXECUTION AND SUPERVISION

The project is executed by the Project Manager of the Lockwood Survey Inc. who reports to UNDP and to the Secretary for Agriculture. F.A.O. has appointed a Resident Engineer to assist with the final stages of the reports, and the Malawi Government has appointed the Chief Irrigation Engineer as Project Co-Manager with the agreement of Lockwood Survey Inc.

3. EXECUTION AND SUPERVISION

The Project has four main elements :-

The project is executed by the Project Manager for the Lower Shire Valley, who reports to UNDP and to the Secretary for Agriculture. T.A.O. [illegible] and a Swedish Engineer to deal with the Ethiel stages of the [illegible] and the National Government has appointed the Chief Irrigation [illegible] as Project Co-ordinator with the Department of Lands, Surveys and Valley

(2)

The first [illegible]

Agricultural Development

Development Project

[illegible]

[illegible]

[illegible]

ATTACHMENT TO DEVELOPMENT PROJECT SUBMISSION

"LAND AND WATER RESOURCES"

The following is an extract from the United Nations Development Programme (Special Fund) Plan of Operation dated 24th September 1966 entitled "Land and Water Resources Development in Southern Malawi" :-

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PURPOSE AND DESCRIPTION

A. PURPOSE OF THE PROJECT

(1.1) The purpose of the project is to assist the Government of Malawi in drawing up a comprehensive programme for development of Southern Malawi's land and water resources and in starting implementation of this programme.

B. DESCRIPTION OF THE PROJECT

(1.2) This will include four main elements; first, the preparation for submission for external financing of a project in the Lilongwe area for land reorganization and development:second, the identification and preparation of possible investment projects capable of being executed in the near future in the Lower Shire Valley; third, the preparation of a feasibility report for the first phase of irrigation development in the Lower Shire Valley bearing in mind the overall possibilities for water resources development, and fourthly, the setting up of an irrigation demonstration unit.

The location of the project is shown on the map attached as an Annex to this report.

(1) LILONGWE AREA:

For this part of the project the IBRD specifically, through its Agricultural Development Services team in Lilongwe, undertakes to prepare on behalf of the Executing Agency (FAO) a project of land reorganisation and development for an area of approximately 500,000 acres in the region of Lilongwe in a form suitable to serve:

(a) as a practical plan for immediate organization of the project and its execution over a period of approximately six years; and

(b) as an application for the external finance required to carry out the project.

The terms and conditions under which this work will be done are set out in full in annex I.

(2) LOWER SHIRE VALLEY:- Rain-fed Cotton Areas

The work here derives from the Government proposal to raise rapidly the output, incomes and productivity of cotton farmers in the Lower Shire Valley, starting with the Ngabu and Tomali areas. It is the intention of the Government to do this by a series of related measures forming an integrated development programme for these areas.

The broad outlines of Government proposals are indicated in the Annexe. The work necessary to bring these proposals to a stage where submission can be made for outside financing for a development project covering 150,000 acres can be completed in a short period. It involves the following items :-

(a) Assembly of appropriate technical and economic data at present available in the records of the Government.

(b) Assessment of the technical possibilities of the proposals and suggestion of modifications as necessary.

(c) Evaluation of the economic costs and benefits in accordance with techniques acceptable t an international financing organization.

(3) LOWER SHIRE VALLEY: Irrigation Development

Previous investigations have indicated that substantial areas of land in the Lower Shire Valley, including the Elephant Marsh, may be suited for development by irrigation and drainage.

First, a preliminary assessment of the ultimate irrigation possibilities should be made, followed by a determination of the size of stage one of the project. The size of the first and subsequent stages depends primarily on an economic assessment of the amount of agricultural production which can be absorbed by both domestic and export markets and the amount of development effort which can be devoted to the project. Such an assessment should be done on the basis of the next 15 years and the next 30 years.

Once the size of the first stage of the project has been established then the following work should be done in preparing the project for submission for external financing of the first stage, including the preparation of a feasibility report based on the following items:

(a) Study of hydrologic conditions to determine quantity and quality of water available for irrigation purposes, and requirements for flood control.

(b) Determine the most desirable site and method for diversion of water from the river, bearing in mind the possibility of irrigation on both sides of the river and the development of the whole river valley.

(c) Determine the location and extent of groundwater supplies.

(d) Make a semi-detailed land classification, if necessary, bearing in mind existing data for the purpose of selecting the most desirable areas for development as stage one and subsequent stages.

(e) Carry out appropriate topographic mapping.

(f) Set up a cropping pattern in relation to soil and water conditions, market possibilities and farm income.

(g) On the basis of the cropping pattern, set up water requirements for design and layout of irrigation system.

(h) Prepare preliminary designs for irrigation and drainage system with cost estimates.

(i) Determine work to be done for on-farm development, including farm layout, drainage, land levelling, clearance etc. with costs.

(j) Determine requirements for farm access and feeder roads with costs.

(k) Determine the best farming pattern on the basis of farm management and income analysis of possible alternative systems, bearing in mind in particular labour and mechanisation requirements and the feasibility of integrating livestock into the farming system.

(l) Determine the requirements for health improvement related to irrigation and agricultural development.

(m) Determine the best organizational and administrative arrangements for execution and operation of the project. This should include both the consideration of the need for an overall development authority as well as the questions of plantation and smallholder agriculture.

(n) Determine the impact of the project on the economy of Malawi, with particular reference to domestic and export market possibilities and resources available for development co-operation.

(o) Carry out economic and financial feasibility analysis in accordance with techniques acceptable to an international financing organization.

(4) IRRIGATION DEMONSTRATION AREA

In order to gain experience with intensive irrigation agriculture, a demonstration unit of not less than 500 irrigable acres will be set up provided that the utility of such a unit is justified in relation to the first phase of irrigation development. The unit would be intended to provide experience in organization and management, give a practical demonstration to farmers both on and off the unit, provide an insight into sociological problems involved, and permit experimentation as necessary.

(3) LOWER SHIRE VALLEY:

(h) Prepare

(i) Determine

(j)

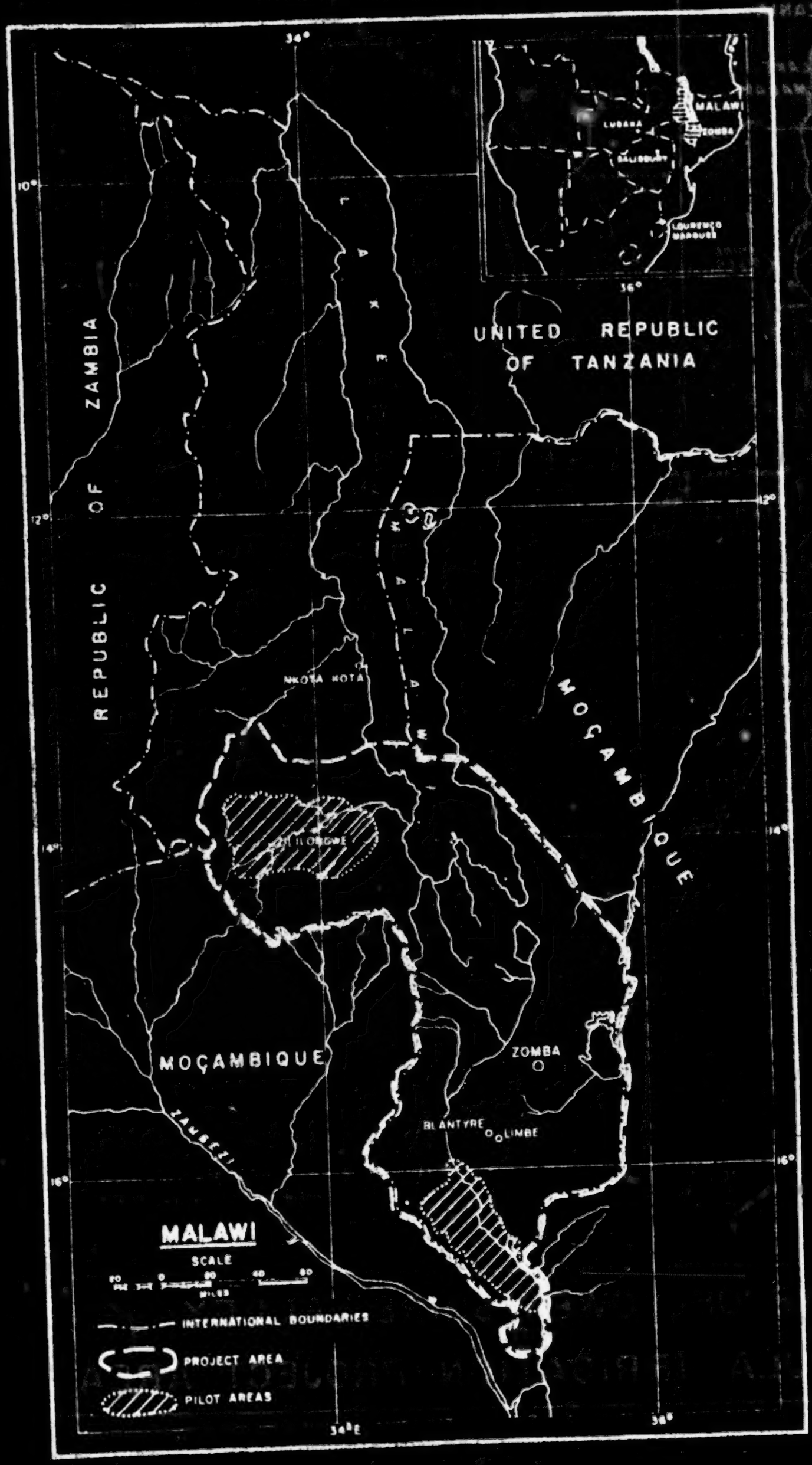
(k) Determine the best

(l) Determine the requirements for

(m) Determine the best

(n) Determine the impact of the project on the economy of Malawi,

(o) Carry out economic and financial feasibility analysis in accordance with techniques acceptable to an international financing organization.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ZAMBIA
UNITED REPUBLIC OF TANZANIA
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MOÇAMBIQUE
NKOTA NKOTA
KARONGWE
ZOMBA
BLANTYRE
LIMBE
ZAMBEZI
MALAWI
SCALE
MILES
INTERNATIONAL BOUNDARIES
PROJECT AREA
PILOT AREAS

1970/71 DEVELOPMENT ESTIMATES
PROJECT SUBMISSION

PROJECT TITLE : LOCAL COSTS - MAPPING FOR DWANGWA PROJECT

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/TECHNICAL SERVICES

MALAWI DEVELOPMENT ESTIMATES 1969 : NEW PROJECT

RELATED PROJECTS : British Irrigated Rice Project
Irrigation Branch

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
10 Special Expenditure	-	1,800	-	-	1,800
TOTAL	-	1,800	-	-	1,800

(b) Non-British, non-Malawi Expenditure

Not applicable.

(c) Previous Expenditure

Nil.

(d) Source of Finance

Local Resources.

2. PROJECT TARGET

To produce a survey of the Dwangwa Area to a scale of 1:5,000 with contour intervals at 1 metre. The survey will cover about 30,000 acres in the Bana Swamp and low lying land on both sides of the Dwangwa delta.

Expected Completion Date: Mid 1970.

3. BACKGROUND INFORMATION

The project provides for the Mdawi Government contribution to the costs of photogrammetrically surveying the area of interest for the British Irrigated Rice Project. The work has been approved as a S.C.A.A.P. project by the British Government. The work is being carried out by Huntings Surveys Ltd. through a local subsidiary. The survey will enable engineering designs to be prepared for a 20,000 acre irrigation scheme, principally for wet rice.

4. PROPOSED WORK 1970/73

The survey will be completed by July 1970.

5. JUSTIFICATION FOR PROPOSED WORK

The survey is an essential pre-requisite for a design study for flood irrigation.

6. EXECUTION AND SUPERVISION

Execution will be by a firm of Photogrammetric specialists under the direction of the Chief Irrigation Engineer who draws on the advice of the Director of Surveys.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : LOCAL COSTS & MAPPING FOR DWANGWA PROJECT

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/TECHNICAL SERVICES

MALAWI DEVELOPMENT ESTIMATES 1969 : NEW PROJECT

1. PROJECT OFFICER

Chief Irrigation Engineer.

2. FINANCIAL DETAILS

(a) Details of Expenditure

Details of Expenditure	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
10 Special Expenditure		-	1,800	-	-	1,800
TOTAL		-	1,800	-	-	1,800

(b) Notes on Expenditure

Nil.

(c) Import Content

See separate schedule for Ministry of Agriculture.

(d) Breakdown of Expenditure by Region

All expenditure in Central Region.

3. LOCATION OF CONSTRUCTION

Not applicable.

1970/71 DEVELOPMENT ESTIMATES
PROJECT SUBMISSION

PROJECT TITLE : LOCAL COSTS - UNDP SEED INDUSTRY DEVELOPMENT PROJECT

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/EXTENSION

MALAWI DEVELOPMENT ESTIMATES 1969 : NEW PROJECT

RELATED PROJECTS : Maize and Groundnut Development
Village Grain Storage Project
UNDP Multi-Country Grain Legume Research Project
Lilongwe Agricultural Development Project - Phase II

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings*	-	10,200	7,200	7,400	24,800
8 Personal Emoluments	-	-	2,550	6,100	8,650
9 Running Expenses	-	-	1,800	2,100	3,900
TOTAL	-	10,200	11,550	15,600	37,350
*21 Houses		7,200	7,200	7,400	21,800
22 Other Buildings		3,000	-	-	3,000

(b) Non-British, Non-Malawi Expenditure

Not applicable.

(c) Previous Expenditure

Nil

(d) Source of Finance

Local Resources.

2. PROJECT TARGET

The target is the rapid expansion of the production of improved seed starting with maize and groundnuts, and the setting up of a seed certification and distribution system for the better farmers of Malawi, and in particular those in the Lilongwe Agricultural Development Project area.

Expected Completion Date:

It is intended to transfer seed multiplication and distribution to a commercial company as soon as possible, leaving only seed testing and certification with the Government.

3. BACKGROUND INFORMATION

The following are extracts from the Government's request for assistance from the U.N.D.P./S.F. from which this project originates:

"The production of seed in Malawi has grown up with the requirements of each crop and has been handled by the organisation most able to handle it. Thus some seed production schemes are handled by the Government alone (through the Extension Branch of the Ministry of Agriculture), or in conjunction with the Farmers Marketing Board. There is no commercial seed organisation in Malawi, although it is believed that there are a number of companies interested in entering the field"

"The Government of Malawi has decided that improved seed production should be given high priority in itn development programme with the intention of supplying the better farmers in Malawi and in particular those in the Lilongwe Land Development Project area, with quality seed of improved maize and groundnut varieties.

The Government recognizes the urgency of the situation that has arisen where the demand for improved seed from the farmer has outrun the capacity of the existing facilities to produce it. As a result the Government is requesting urgently assistance from the U.N.D.P./ Special Fund to assist it in the rapid expansion of maize and groundnut seed production and in the setting up of a seed certification and distribution system. The specific objectives of the project should be:-

(a) to test in the area of operation locally produced and introduced varieties for high yield, resistance to disease and insect pests, etc.;

(b) to establish an effective seed production scheme, including activities of contracting, field inspection, seed processing, seed storage, seed certification, seed testing, seed distribution and seed legislation;

(c) to train national technicians in seed production, seed certification and seed distribution activities."

This project deals with the production and distribution of selected varieties of seed. A related project entitled the "U.N.D.P. Multi-Country Grain Legume Research Project" will aim to increase the range of grain legume varieties suitable for conditions in Malawi and the other participating contries. Seed of selected varieties would then be multiplied and released to the public under the present project.

4. PROPOSED WORK 1970/73

The production of the improved or introduced mother seed will be done at Chitedze Agricultural Research Station where there are already 1,200 acres of land plus buildings, laboratories and some storage facilities. Thereafter contract growers within the vicinity of Lilongwe will be licensed to grow seed in order to simplify inspection procedures. It is hoped that eventually the seed production and distribution activities will be delegated to a commercial organisation, but the Government through legislation will provide proper control services to ensure that the standards for varietal and physical purity and germination are maintained. In addition facilities for the distribution of the seed produced will be set up.

The project will eventually cover a seed production area of 600 - 700 acres of maize and 700 - 800 acres of groundnuts, which are expected to produce about 1,250 tons of maize and about 300 tons of groundnut seed. With these quantities 100,000 to 150,000 acres of maize and about 6000 acres of groundnuts will be planted in each year.

It is envisaged that the scope of the scheme will eventually widen to include other crops, for example rice.

5. JUSTIFICATION FOR PROPOSED WORK

Maize and groundnuts have been chosen because of the increased research efforts which have been put into them resulting in greatly improved varieties. Maize is the staple diet throughout the rural areas of Malawi and emphasis is being placed upon securing a significant increase in yield per unit of area cultivated to secure an adequate internal production, to meet consumer demand and to release land for the growing of cash crops. Groundnuts have a certain export potential being the third most valuable export crop of Malawi and it is Government policy that production of a uniform confectionery nut should be stimulated to increase surplus above Malawi's domestic needs from 25,200 tons to 70,000 tons in 1975.

6. EXECUTION AND SUPERVISION

The execution of the project will be carried out by a Project Manager provided by U.N.D.P., with the assistance of a Senior Government Seeds Officer as co-manager under the direction of the Secretary for Agriculture.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : LOCAL COSTS - UNDP SEED INDUSTRY DEVELOPMENT PROJECT

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/EXTENSION

MALAWI DEVELOPMENT ESTIMATES 1969 : NEW PROJECT

1. PROJECT OFFICER

The Chief Agricultural Extension Officer.

2. FINANCIAL DETAILS

(a) Details of Expenditure	Notes	Jan-Mar 1970	1970/71	1971/72	1973/72	TOTAL 3 Yrs.
2 Buildings						
Houses - CH & PH (W)	(1)	-	7,200	7,200	7,400	21,800
Offices (W)	(2)	-	3,000	-	-	3,000
		-	10,200	7,200	7,400	24,800
8 Personal Emoluments						
Co-Manager (P.O.)	(3)	-	-	-	1,425	1,425
Seed Testing Officer (PO)	(4)	-	-	1,425	1,425	2,850
Seed Technologist (P.O.)	(5)	-	-	-	1,425	1,425
2/3 Lab Assistants (T.A.)	(6)	-	-	425	425	850
Executive, Clerical and Typing staff	(7)	-	-	500	1,200	1,700
Driver		-	-	200	200	400
		-	-	2,550	6,100	8,650
9 Running Expenses						
Transport and Travelling	(8)	-	-	800	1,100	1,900
Running Costs	(9)	-	-	1,000	1,000	2,000
		-	-	1,800	2,100	3,900
TOTAL		-	10,200	11,550	15,600	37,350

(W) = As costed for construction by the Ministry of Works and Supplies.

(b) Notes on Expenditure

(1) Houses : 1 CH4 @ £5,900
2 PH4 @ £ 650

(2) Offices: for seed testing staff and co-manager.

(3) Co-Manager (P.O.) : a Counterpart who will work with U.N. Experts to coordinate the project.

(4) Seed Testing Officer (P.O.) : required for control services of seed testing and certification in order to ensure that the proper standards are maintained.

(5) Seed Technologist (P.O.) : will be responsible for seed production and specifying the agricultural operations necessary to ensure good seed crops.

(6) 2/3 Laboratory Assistants : these will work under the Experts and Professional Officers in the seed testing laboratory.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : LOCAL COSTS - PRE-PLANNING OF MAJOR AGRICULTURAL PROJECTS

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/TECHNICAL SERVICES

MALAWI DEVELOPMENT ESTIMATES, 1969: NEW PROJECT

1. PROJECT OFFICER

The Chief Agricultural Technical Services Officer through the Chief Irrigation Engineer and the Principal Land Use Officer.

2. FINANCIAL DETAILS

(a) Details of Expenditure

	Jan/Mar 1970	1970/1	1971/2	1972/3	TOTAL 3 Yrs.
10 Special Expenditure	-	5,000	20,000	20,000	45,000
TOTAL	-	5,000	20,000	20,000	45,000

(b) Notes on Expenditure

Funds will be used for aerial and ground survey contracts, and other specialised surveys carried out by Consultants.

(c) Import Content

See separate schedule for Ministry of Agriculture.

(d) Breakdown of Expenditure by Region

	1970/71		
	S	C	N
Special Expenditure	1,000	1,000	3,000
T O T A L	1,000	1,000	3,000

Breakdown of expenditure in later years dependent on selection of future Development Areas.

3. LOCATION OF CONSTRUCTION

None expected.

NOTE ON CATEGORIES OF EXPENDITURE

The standard categories of expenditure used in this book of Project Submissions are as follows:-

Category		
	1	Design and Supervision
	2	Buildings *(sub-divided below)
	3	Water Supplies
	4	Roads and Bridges
	5	Other Construction
	6	Plant and Vehicles
	7	Other Equipment
	8	Personal Emoluments
	9	Running Expenses
	10	Special Expenditure

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	*21	Houses
	22	Other Buildings

MALAWI

1 33° 2 34° 3 35° 4 5

A B C D E F G

11° 12° 13° 14° 15° 16°

36°

Lusungo · Mwaya · Muyande · Songwe · Mwasalano · Kaporo · Malisa · Karonga · Makanda

Vua · Chilumba · Masasi · Manda · Livingstonia · Mlowe · Lundu · Kirapa · Usumbo · Liuli · Ruarwe · Usisya · Mango · Mbamba Bay · Tingi · Matimbuka · Mpitimbi · Liganga · Songea

Kaniku · Kafeku · Ekwendeni · Mpata · Kafukai · Ezilai · Chiwina · KANDOLI MOUNTAINS · 5314 · 3227 · Nkhata Bay · NKHATA BAY · Kabunduli · Mankhambira · Chintsche · Bandawe · Mzimba · Olivença

Kanyanga · Edingeni · Kapindo · Lundazi · Ciluvya · Bana · Lwaladzi · Lumezi · Cimbirinjanji · Chanoma · Mecunda · Mtangula · Maniamba · Sanga · Unango · Mzuzu · NKHOTA KOTA · KASUNGU · Kasungu · Mtango · Kasera · NTCHISI · Ntchisi · Chintembwe · Bengo · Mbenji I. · Vila Cabral · Lifunde · Madisi · Mpaneia · Chipata · Dowa · Fort Maguire · Chirenda · Catur · Salima · Mvera · Lombadzi · Nsaru · Maleri I. · Domwa I. · Kadanzhe · Chipoka · Bakula · LILONGWE · Likuni · Mchoma · Mayani · Kachindamoto · Monkey Bay · Kadango · Boadzulu I. · Malembo · Namwera · Mandimba · Malindi · Fort Johnston · Kasinje · JOHNSTON · Lukulungwe · Mpira · Nova Freixo · Vila Coutinho · Vila Mouzinho · NCHEU · Chamba · KASUPE · Furancungo · Chipone · Balaka · Kasupe · Mpimbe · Damasi · Mecanhelas · Chipera · Casula · Chiuta · Massamba · Zobue · BLANTYRE · ZOMBA · Chawesa · Mwanza · Chiradzulu · Chileka · BLANTYRE · LUMBE · Namonga · Sarare · Cana Cana · Va Caldas Xavier · Chikwawa

Mountains: Mlanje 3002 · Zomba 2124 · Mulanje 3065 · Mt. Mlanje 3480

Rivers: Zambezi · Shire · Ruo · Lujenda · Luangwa

3. BACKGROUND INFORMATION

The Chinese Technical Assistance programme was expanded from two teams to five early in 1969 as a result of the expanded Technical Assistance Protocol signed in December, 1968, with the Government of the Republic of China. All five teams are now at full strength and are posted to Karonga, Limpasa Dambo (Nkhata Bay), Nkhota-Kota, Likangala (Zomba), and Tengadzi (Nsanje). They operate a number of satelite stations based on each headquarters station.

4. PROPOSED WORK 1970/73

Continuation of the support required under the Protocol which includes running expenses for transport, allowances, training costs and salaries of the staff attached for training and liaison duties. Some minor building work is included.

5. JUSTIFICATION FOR PROPOSED WORK

The objective is to stimulate by large scale demonstration and extension work the growing of rice for the export market, principally to South Africa. There is a ready market for Malawian rice in South Africa.

6. EXECUTION AND SUPERVISION

The local counterpart to the leader of the Chinese team is the Chief Irrigation Engineer.

Expenditure on this project is made on the authority of the Chief Irrigation Engineer of the Ministry of Agriculture.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : LOCAL COSTS - TAIWAN TECHNICAL ASSISTANCE

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/TECHNICAL SERVICES

MALAWI DEVELOPMENT ESTIMATES 1969 : HEAD 77 ITEM 62

1. PROJECT OFFICER

The Chief Irrigation Engineer.

2. FINANCIAL DETAILS

(a) Details of Expenditure	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings (M)	(1)	-	1,000	1,150	1,150	3,300
5 Other Construction (M)	(2)	200	1,200	1,200	1,200	3,600
6 Plant and Vehicles	(3)	-	4,200	4,500	4,500	13,200
8 Personal Emoluments						
Development Assistants	(4)	2,100	6,250	6,450	6,450	19,150
Drivers	(5)	600	2,500	2,500	2,500	7,500
Labour	(6)	250	1,000	1,000	1,000	3,000
		2,950	9,750	9,950	9,950	29,650
9 Running Expenses						
Maintenance & Running Expenses	(7)	1,100	3,500	3,500	3,500	10,500
Transport and Travelling	(8)	100	400	400	400	1,200
Tools, materials, clothes	(9)	200	1,000	500	500	2,000
Allowances and food-stuffs	(10)	450	950	800	800	2,550
		1,850	5,850	5,200	5,200	16,250
		5,000	22,000	22,000	22,000	66,000

(M) - As costed for construction by the Ministry of Agriculture.

(b) Notes on Expenditure

(1) Local type accommodation for Development Assistants (£1,900), construction of a greenhouse to assist with paddy breeding work (£1,000) and construction of stores (£400).

(2) Assistance with minor irrigation schemes as agreed in the Protocol.

(3) Purchase of 1 Landrover and 1 Ferguson 165 tractor complete with plough, rotavator, harrow and trailer. It is intended to have one on each demonstration area. Purchase of pipes and pumps for irrigation.

(4) 75 Development Assistants.

(5) 10 Drivers.

(6) Miscellaneous labour as provided for in the Protocol.

(7) Fuel and repair for 10 vehicles.

(8) Travelling expenses for senior supervising staff.

(9) Tools and working clothes for Development Assistants and Young Pioneers under training.

(10) Allowances for Young Pioneers under training.

(c) Import Content

See separate schedule for Agriculture.

(d) Breakdown of expenditure by Region

	Jan-Mar 1970			1970/71				1971/72				1972/73			
	S	C	N	S	C	N	HQ	S	C	N	HQ	S	C	N	HQ
2 Buildings	-	-	-	300	400	300	-	300	400	300	150	300	400	300	150
5 Other Construction	200	-	-	400	400	400	-	400	400	400	-	400	400	400	-
6 Plant and Vehicles	-	-	-	-	-	-	4200	-	-	-	4500	-	-	-	4500
8 Personal Emoluments	1200	550	1200	3000	3000	3750	-	3000	3000	3950	-	3000	3000	3950	-
9 Running Expenses	650	600	600	1900	1900	2050	-	1700	1700	1800	-	1700	1700	1800	-
	2050	1150	1800	5600	5700	6500	4200	5400	5500	6450	4650	5400	5500	6450	4650

3. LOCATION OF CONSTRUCTION

At Karonga, Limpasa Dambo (Nkhata Bay), Nkhota Kota, Likangala (Zomba), and Tengadzi (Nsanje). All by Ministry of Agriculture.

1970/71 DEVELOPMENT ESTIMATES

PROJECT SUBMISSION

PROJECT TITLE : LOCAL COSTS - UNDP LAND AND WATER RESOURCES PROJECT (formerly UNDP Survey of Lower Shire)

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/TECHNICAL SERVICES

MALAWI DEVELOPMENT ESTIMATES 1969: HEAD 77 ITEM 63

RELATED PROJECTS : Lilongwe Agricultural Development Project
Chikwawa Rainfed Cotton Development Project
Pre-Planning Major Agricultural Projects

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
8 Personal Emoluments	275	825	-	-	825
9 Running Expenses	525	1,575	-	-	1,575
TOTAL	800	2,400	-	-	2,400

(b) Non-British, non-Malawi Expenditure

Not applicable.

(c) Previous Expenditure

	£	Cumulative Total
1965	2,510	2,510
1966	43,332	45,842
1967	55,582	101,424
1968	20,371	121,795
1969 Printed Estimates	10,700	
1969 Revised Estimates	10,492	
1969 Estimated carry forward	208	
Of which Jan/March 1970	208	

(The total expenditure also includes the costs of planning the Lilongwe Agricultural Development Scheme - Phase I).

(d) Source of Finance

Local Resources.

2. PROJECT TARGET

To provide the local costs of the United Nations Development Programme Spetial Fund Project "Land and Water Resources Development in Southern Malawi".

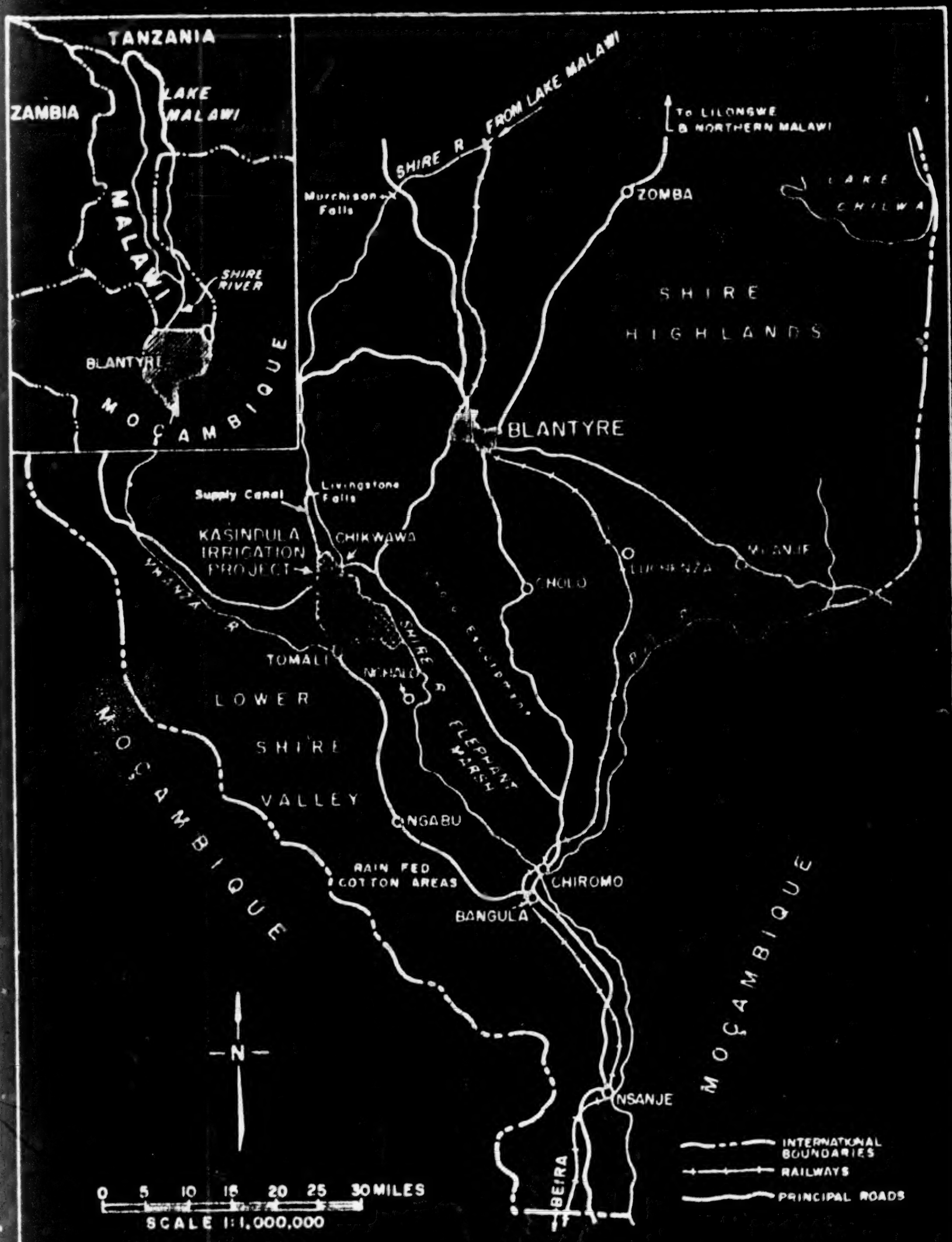
Expected Completion Date

The Project has four elements of which the first two are completed and the fourth is being financed from another source. The expenditure provided for above is for the completion of the third element - a feasability report for irrigation development in the Lower Shire Valley - The last part of this report is to be delivered by April 1st 1970, and will be paid for in the 1970/71 financial year.

3. BACKGROUND INFORMATION

This project provides the local costs of the UNDP Special Fund Project "Land and Water Resources Development in Southern Malawi".

The Land and Water Resources Project was the first undertaken by the United Nations in Malawi after Independence in 1964, and an extract from the Plan of Operations is attached, setting out its purpose and description, together with a map of the project area.



MAP OF LOWER SHIRE VALLEY & KASINDULA IRRIGATION PROJECT AREA

KASINDULA IRRIGATION PROJECT

DATA SHEET

Gross project area between Chikwawa and Mwanza River (including non-arable lands)	42,000 Acres
Net irrigable area within project area (Surface Irrigation)	18,240 Acres
Additional net irrigable area only suitable for sprinkler irrigation.	2,780 Acres
Proposed extension area south of Mwanza River	10,000 Acres (approx)
Source of water supply	SHIRE RIVER at head of Livingstone Falls
Supply Canal capacity (Gravity diversion canal 10 miles long)	Project Area/400 cusecs Supply to future extension areas south of Mwanza River 200 cusecs TOTAL 600 cusecs
Overall Irrigation duty at river diversion point	55 Acres / cusec
Project Development	Estate 15,920 Acres Smallholders 2,320 Acres 18,240 Acres Sprinkler Irrigation 2,780 Acres 21,020 Acres
Main Crops	Rice, Cotton, Kenaf and Maize
Capital cost of implementing project	Engineering M£ 5,042,000 Agricultural Development M£ 882,600 M£ 5,924,600 (U.S $ 14,219,000)
Annually recurrent cost of irrigation maintenance and operation.	M£ 81,000
Internal RATE OF RETURN of project	20 PERCENT
Increase in gross value of production	M£ 2,831,000 Annually (U.S $ 6,794,000)

TANZANIA

ZAMBIA

MAP OF [illegible] POWER [illegible]

&

KASINDULA IRRIGATION PROJECT [illegible]

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : LOCAL COSTS - U.N.D.P. LAND AND WATER RESOURCES PROJECT (formerly UNDP Survey of Lower Shire)

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/TECHNICAL SERVICES

MALAWI DEVELOPMENT ESTIMATES 1969: HEAD 73 ITEM 63

1. PROJECT OFFICER

Chief Irrigation Engineer.

2. FINANCIAL DETAILS

(a) Details of Expenditure

	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
8 Personal Emoluments					
Secretarial Staff	150	450	-	-	450
Clerical Staff, drivers, technical assistants, etc.	125	375	-	-	375
	275	825	-	-	825
9 Running Expenses					
M. & R.E. of M.Vehicles	250	750	-	-	750
Office Expenses	125	375	-	-	375
Rent, Rates and Telephones	125	375	-	-	375
Transport and Travelling	25	75	-	-	75
	525	1,575	-	-	1,575
TOTAL	800	2,400	-	-	2,400

(b) Notes on Expenditure

Expenditure provides for the running of the Lockwood Survey office in Blantyre and their transport fleet for a period of 6 months. Provision is also intended to cover the costs of subsequent financing appraisal missions.

(c) Import Content

See separate schedule for Ministry of Agriculture.

(d) Breakdown of Expenditure by Region

All expenditure will be in the Southern Region.

3. LOCATION OF CONSTRUCTION

Nil.

(7) Executive, Clerical and Typing staff : these will provide administrative and secretarial services.

(8) Transport and Travelling : allowances paid to officers while travelling on duty.

(9) Running Costs : running of motor vehicles and plant in addition to the costs of stationery, water, electricity and telephone.

(c) Import Content

See separate schedule for the Ministry of Agriculture.

(d) Breakdown of Expenditure by Region

All expenditure will be in the Central Region unless it is decided to locate the housing and offices at Bvumbwe Research Station.

3. LOCATION OF CONSTRUCTION

All construction to be carried out by the Ministry of Works and Supplies:

Houses: 1 CH4 at either Bvumbwe or Chitedze (to be decided)

2 PH4 (modified)

Offices: At either Bvumbwe or Chitedze (to be decided).

1970/71 DEVELOPMENT ESTIMATES

PROJECT SUBMISSION

PROJECT TITLE : LOCAL COSTS - PRE-PLANNING OF MAJOR AGRICULTURAL PROJECTS

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/TECHNICAL SERVICES

MALAWI DEVELOPMENT ESTIMATES, 1969: NEW PROJECT

RELATED PROJECTS : Local Costs - UNDP Land and Water Resources Project.
British Irrigated Rice Project.
Hydrological Studies for Tea Irrigation
Agro-Economic Survey
Karonga Development Project (proposed)

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan/Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
10 Special Expenditure	-	5,000	20,000	20,000	45,000
TOTAL	-	5,000	20,000	20,000	45,000

(b) Non-British, Non-Malawi Expenditure

Not applicable.

(c) Previous Expenditure

Expenditure on the pre-planning of major agricultural projects has been incurred in a number of ways and details of these are given in "Background Information" below.

(d) Source of Finance

Local Resources.

2. PROJECT TARGET

To carry out preliminary survey and investigation work on new Major Agricultural Development Projects. The first of these is the Karonga Project planned to start in 1971.

Expected Completion Date: Continuing Project.

3. BACKGROUND INFORMATION

Shortly after Independence in 1964 the United Nations Development Programme undertook a project entitled "Land and Water Resources Development in Southern Malawi". The purpose of this project was to prepare for Major Agricultural Development Projects in the Lilongwe area and in the Lower Shire River Valley.

As a result two major projects are now being carried out with finance from the International Development Association. These are the Lilongwe Agricultural Development Project and the Chikwawa Rainfed Cotton Development Project.

In addition a third major project, entitled the Salima Lakeshore Development Project, is being carried out with finance from the Federal Republic of Germany.

The costs of pre-planning these projects were found as follows:-

Lilongwe (Phase I). / Chikwawa Rainfed Cotton.	From the UNDP Land and Water Resources Project, together with counterpart contributions from the Malawi Government.
Salima Lakeshore Development Project.	Technical Assistance from the Federal Republic of Germany.

A further major project for the Lower Shire Valley has been planned under the UNDP Land and Water Resources Project, using consultants under contract to the F.A.O. The cost is being shared between the UNDP and the Malawi Government.

This planning has taken into account earlier studies, particularly the U.K.Government financed "Shire Valley Project", carried out in 1952/54 by Sir William Halcrow and Partners, and a survey of the reclamation and control of the Elephant Marsh in the Lower Shire Valley, carried out in 1960/61 by the Dutch NEDECO firm of consultants.

The present proposal is for a major irrigation scheme covering an initial 22,000 acres, and as a first step a 450 acre pilot project (the Kasindula Irrigation Project) is being undertaken.

The following is a summary of the pre-planning costs of the existing and already planned major projects:-

Projects	External Sources	Malawi Govt.
Lilongwe / Chikwawa Rainfed	UNDP Land and Water Resources Project	£45,842
Salima	German Technical Assistance	NIL
Chikwawa Irrigation	UNDP through FAO and Contractors	£89,645

Planning is now being carried out for an extension of the Lilongwe Agricultural Development Project (to be known as Phase II). The cost of this has so far been borne by the Agricultural Development Service of the World Bank.

The British Government under its technical assistance programme is carrying out a pre-investment study of the possibility of a major rice irrigation project on the lakeshore of the Nkhotakota District. This project is known as the "British Irrigated Rice Project" and the cost is being shared between British Technical Assistance, the British Development Loan to Malawi and Malawi Government Local Resources.

The Salima Project includes investigation and experimentation into the possibility of a future separate major rice irrigation project. It is hoped that these pre-planning costs can continue to be met from German Technical Assistance.

The Tea Research Foundation of Central Africa has reported that marked yield increases can be gained by irrigating tea in the dry season in the Cholo/Mlanje Tea Areas. This has led to consideration of the possibility of a major irrigation project for the area, and preliminary hydrological investigations are being carried out with funds from the British Development Loan.

UNDP aid has also been given for investigation of the possibilities of major development in the Limpasa Dambo area of the Nkhata-Bay Lakeshore. The cost of this investigation has been met by the UNDP, but the Malawi Government, as part of its agricultural research project has established a rice research station in the area using British Development Loan Funds.

4. PROPOSED WORK 1970/73

The Malawi Government is considering further possible major agricultural development projects. The present project is designed to provide some of the costs of pre-planning these, and it is hoped that it will continue to be possible to attract external aid for the bulk of these costs.

The first project under consideration is for the Karonga District. This is a comprehensive scheme for the optimum agricultural exploitation of a geographical area. It aims to transform the economy of the Karonga District, to utilise the resources of its land, water and people and to make a significant contribution to the national economy both by earning foreign exchange and by the increase of livestock production for internal protein consumption. It will be an integrated project containing social aspects such as health and community development as well as purely agricultural investment.

A considerable part of the proposed work in the Karonga and other project areas involves irrigation, for which mapping is required at a more detailed scale, than the existing 1 : 50,000 general maps.

In 1970/71 detailed topographic and soil surveys of potential irrigation schemes will be made in the area of the proposed Karonga Project at Songwe, Kaporo, Lufilya, Nyungwe and Wovwe. Low level aerial photography will take place over parts of the Karonga Lakeshore Plain which are not covered by existing photography. Enlargements and Mosaics of existing photography are required for the whole project area for land use planning. Provision is also made for investigations in the Kasungu District with a view to increasing the tobacco acreage.

In the period 1971/73 it is expected that similar work will continue to be carried out for the Karonga Project and other areas of potential development including Rumpi (Henga Valley), North and South Mzimba, Nkhotakota, the Balaka/Bwanje area, the Cholo/Mlanje Tea Zone, and the East Bank area of Chikwawa including the Cholo escarpment. A number of ranching areas are also under investigation and require additional facilities.

In order to provide control for aerial photography ground control has to be established and traces cut for soil and land use survey.

For land use planning work which is the first stage in regional land planning, mosaics at a larger scale than that provided in the national cover are required.

Initial planning preparation has in most cases to commence 3-4 years before all necessary data is collected with which to construct a regional development plan, which could attract external financing. One or two years elapse before sufficient information is to hand to mount pilot projects under existing projects such as Irrigation and Settlement.

In some cases economic surveys have to be mounted before deciding on a course of action. These involve local costs.

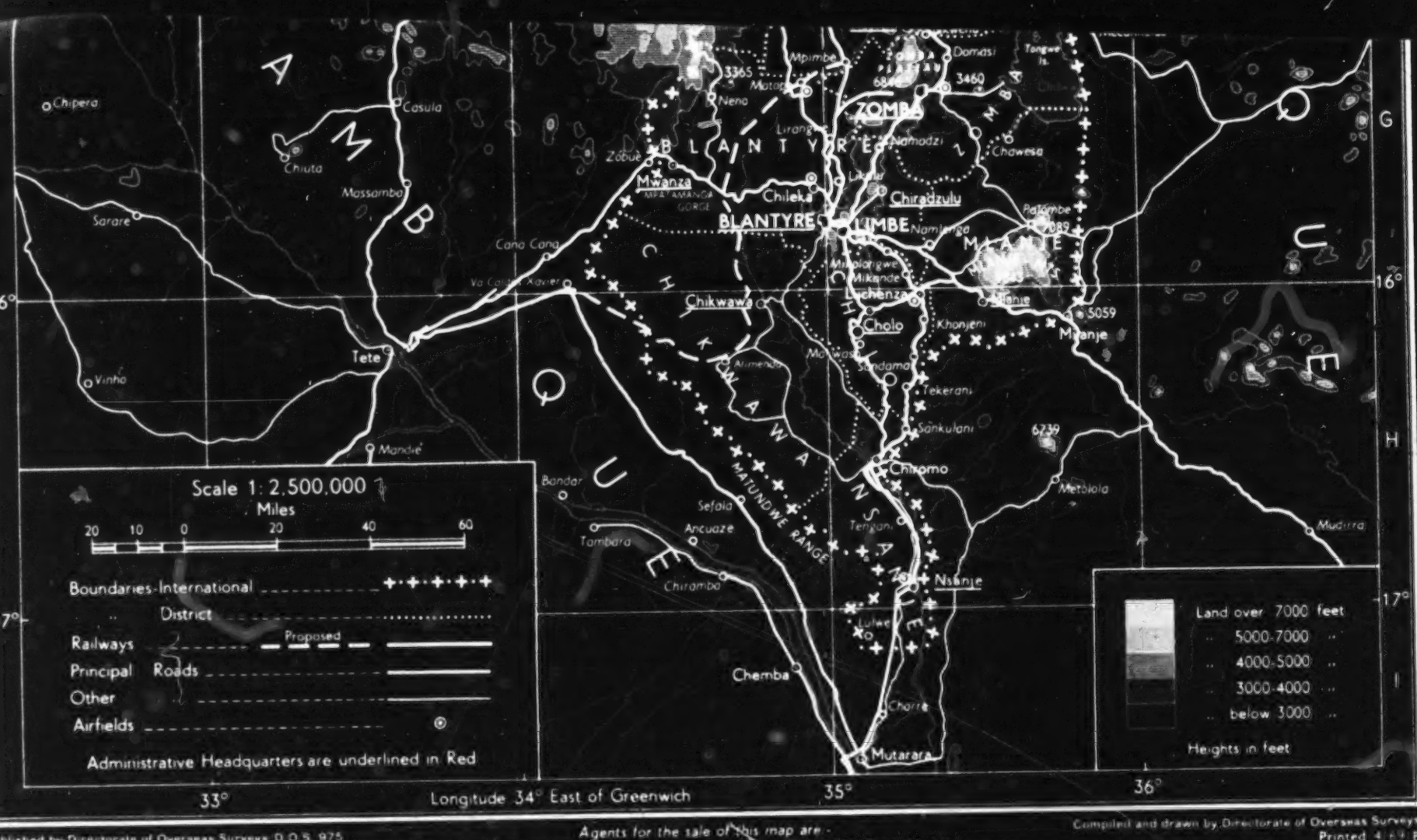
While as far as possible it is intended to work through a regular programme, changes in world market conditions or in priorities in other fields of Government necessitate urgent action in certain localities for which no other source of finance is readily available.

5. JUSTIFICATION FOR PROPOSED WORK

Without careful preliminary investigation no major project can be properly planned or succeed in attracting finance.

6. EXECUTION AND SUPERVISION

The project will be executed in part by the Chief Irrigation Engineer and in part by the Principal Land Use Officer, in consultation with the Director of Surveys.



MALAWI GOVERNMENT 1969

GOVERNMENT OF MALAWI

DEVELOPMENT PROGRAMME

1970—72/73

Volume II

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C O N T E N T S

Note: The layout of this book follows that of the 1970/71 Malawi Government Development Estimates, which it supplements and illustrates.

Projects are grouped by Heads of the Estimates, and appear in order of Items.

A project should be referred to by Head, title and page. Thus: "Head 79, 'Sawmilling', page 2."

SECTION 1

INTRODUCTION

General

The Development Programme 1970/71

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B: 3 years by projects
C: 1970/71 summary
D: 1970/71 by projects.

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Customs & Excise
Education
Fisheries
Forestry & Game
Geological Survey
Health
Housing
Industrial Development
Justice (Traditional Courts)
Labour
Local Government
Posts & Telecommunications
Office of the President & Cabinet
Statistics
Surveys
Trade and Industry
Transport
Veterinary Services
Water Supplies & Sanitation
Works Organisation and Overheads

SECTION 3 (White)

DEVELOPMENT PROJECT SUBMISSIONS BY HEAD & ITEM

A list follows.

GENERAL MAP OF MALAWI

£1 Malawi (£ M) = $ 2.40.

From 1st April 1970 the Malawi Government financial year will run from 1st April to 31st March. The period 1st January 1970 - 31st March 1970 is included for estimating purposes with the previous financial year, 1st January 1969 to 31st December 1969.

8-14-72 1MF

1970/71 DEVELOPMENT PROJECT SUBMISSIONS BY HEAD AND ITEM

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10	Agro-Economic Survey
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1970/71 DEVELOPMENT ESTIMATES
PROJECT SUBMISSION

PROJECT TITLE : FISHERIES DEVELOPMENT

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/FISHERIES

MALAWI DEVELOPMENT ESTIMATES, 1969 : HEAD 78 ITEM 1

BRITISH AIDED PROJECT NO. : 26

RELATED PROJECTS : U.N.D.P. Fisheries Project

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings*	300	1,000	1,000	2,000	4,000
8 Personal Emoluments	2,645	11,513	11,885	12,000	35,398
9 Running Expenses	1,953	10,830	9,585	10,000	30,415
TOTAL	4,898	23,343	22,470	24,000	69,813
*22 Other Buildings	300	1,000	1,000	2,000	4,000

(b) Non-British, Non-Malawi Expenditure

Nil

(c) Previous Expenditure

	£	Cumulative Total
To 31/12/65	7,759	7,759
1966	15,451	23,210
1967	55,219	78,429
1968 Actual Expenditure	30,506	108,935
1969 Printed Estimates	21,964	-
1969 Revised Estimates	21,000	-
1969 Estimated Carry-forward	Nil	-

(d) Source of Finance

U.K. Development Loan.

2. PROJECT TARGET

To establish an effective Government Fisheries Service by providing staff, buildings, equipment and running expenses in the fields of training, extension and fisheries administration, complementary to those provided under Revenue Account.

Expected Completion Date:

Continuing Project. Will be transferred to Revenue Account as soon as possible.

3. BACKGROUND INFORMATION

The establishment of the Fisheries Department under Revenue Account (excluding the Fisheries Research Unit) is two Professional Officers, four Technical Officers and supporting junior staff. The Research Unit has three Professional Officers (one superscale) and two Technical Officers. The present project augments the establishment of the extension and marketing services by providing for the employment of an additional Professional Officer (Chief Fisheries Officer), two

By the end of 1969 the following building works will be completed and equipment purchased under the project:-

(i) Training School for junior departmental staff together with senior staff house in Fort Johnston District;

(ii) Senior staff house in Lower Shire River area;

(iii) Seven junior staff houses;

(iv) New jetty at Kachulu on Lake Chilwa;

(v) Feeder roads to Chembe, Mpwepwe, Namiasi, Mtundu, Chipeleka, and Chapola fishing villages (about 19 miles);

(vi) One 12 seat bus (for training schools);

(vii) Four Landrovers;

(viii) One fast launch, one fishing boat and one small air cushion vehicle (hovercraft).

The use of the staff buildings and equipment provided under the project is closely integrated with use of resources provided under Revenue Account and both are applied to the implementation of Government's declared policy aims in the fisheries field.

The most dramatic result of the investment of staff and equipment listed above has been the development of a trawl-net fishery for Lethrinops (Chisawasawa) a species of fish previously unharvested, for which a fishing method has been evolved, tested, modified to suit operations of indigenous fishermen and successfully introduced, all within 18 months of 1968 and 1969. The credit for this success goes very largely to this project. It could not have occurred without it.

4. PROPOSED WORK FOR 1970/73

The pre-entry training of all new Technical Assistant staff will continue. Rationalisation of the collection of fisheries statistics will be continued and expanded. Experimental and exploratory fishing will continue in the Southern part of Lake Malawi. These efforts will be directed particularly towards proving the extent of the Lethrinops species that could be caught by the newly developed trawl net fishery, but work on other species will continue; successful methods would be extended to the waters of the Central and Northern Regions. The premises of a former fishing company have been acquired and will be operated as a public fish landing especially for the Chisawasawa. Data collection of marketing and landing statistics will continue.

5. JUSTIFICATION FOR PROPOSED WORK

The training of junior staff is essential to produce the competent corps of extension workers on which further development of the fisheries depends. The programme of exploratory and experimental fishing will indicate fishing grounds, and methods of exploiting them, that will serve to increase total fish landings and supply more animal protein to the population. The development of a marketing system for the Chisawasawa is essential if development of the industry is not to be hampered by lack of sales outlets. The new trawl-boats land relatively large quantities of fish at one time and cannot be accommodated within a 'beach' landing system that has evolved to meet the requirements of a canoe fishery and small scale gill-netting. The rehabilitation of an existing fish landing jetty and its operation by the department as a landing and marketing facility will foster the development of the trawl-net fishery.

6. EXECUTION AND SUPERVISION

The project is executed together with work financed under Revenue Account under the overall supervision of the Chief Fisheries Officer who is provided for in this project.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMSSION

PROJECT TITLE : FISHERIES DEVELOPMENT

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/FISHERIES

MALAWI DEVELOPMENT ESTIMATES, 1969 : HEAD 78 ITEM 1

BRITISH AIDED PROJECT NO. : 26

1. PROJECT OFFICER : Chief Fisheries Officer

2. FINANCIAL DETAILS

(a) Details of Expenditure	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs
2 Buildings (M)	(1)	300	1,000	1,000	2,000	4,000
8 Personal Emoluments						
Chief Fisheries Officer		500	2,000	2,000	2,000	6,000
Fish Marketing Officer	(2)	125	500	520	540	1,560
Senior Fish Ranger		293	1,276	1,276	1,280	3,832
21 Fisheries Assistants	(3)	831	4,177	4,439	4,500	13,116
3 Clerical Officers	(4)	122	510	550	580	1,640
Non-Established Staff	(5)	774	3,050	3,100	3,100	9,250
		2,645	11,513	11,885	12,000	35,398
9 Running Expenses						
Transport and Travelling		475	2,000	2,000	2,000	6,000
M. & R.E. Vehicles	(6)	250	1,950	1,950	1,950	5,850
M. & R.E. Launches	(7)	375	1,700	1,700	1,700	5,100
M. &. R.E. Plant	(8)	120	450	450	450	1,350
Tools Equipment, Materials	(9)	505	2,500	2,000	2,260	6,760
Temporary Buildings	(10)	-	1,000	250	400	1,650
Maintenance of Buildings	(11)	- -	300	300	300	900
Library	(12)	25	120	125	130	375
Foodstuffs	(13)	113	450	450	450	1,350
Allowance for Students	(14)	90	360	360	360	1,080
		1,953	10,830	9,585	10,000	30,415
TOTAL		4,898	23,343	22,470	24,000	69,813

(M) = Costed for construction by the Fisheries Department.

(b) Notes on Expenditure

(1) Buildings: provision for a phased rehabilitation of Neilsen's Fishery premises which are to be managed by the Department as a fish landing for Chisawasawa.

(2) Fish Marketing Officer: it is probable that this post will be occupied at the T.O. level.

(b) Notes on Expenditure - Cont'd

(3) Fisheries Assistants: includes former provision for Senior Fisheries Assistants (H.T.A.), now in the same grade.

(4) Clerical Officers: 3 Clerical Officers dealing with fisheries statistics and general work in the Chief Fisheries Officer's Office.

(5) Non-Established Staff: includes provision for Drivers, boat crews, fish market staff and general labour.

(6) M. & R.E. Vehicles: Four Landrovers at £400 each and a school bus at £350.

(7) M. & R.E. Launches: one launch at £700, one at £400 and one at £600. (The increased maintenance costs due to granting a maintenance contract to Malawi Railways are covered under Revenue Account).

(8) M. & R.E. Plant: for the maintenance of water pumping plant at the Fisheries Assistants' Training School.

(9) Tools, Equipment and Materials: for the maintenance and replacement of fishing gear, teaching equipment, demonstration materials, cleaning and other materials at the new fish landing.

(10) Construction and Maintenance of Temporary Buildings: the expanding programme of statistics and increased extension work require that temporary housing be built on fishing beaches for staff. This will enable the Department's work to be related to the fishery directly rather than based on the distribution of limited permanent housing.

(11) Maintenance of Buildings: for the maintenance of permanent buildings provided for under the project.

(12) Library: for books and periodicals for the training school.

(13) Foodstuffs: for feeding trainees at 2/- per diem for 300 days per annum.

(14) Allowances: £2 per month for each of 15 trainees.

(c) Import Content

See separate schedule for Ministry of Agriculture.

(c) Breakdown of Expenditure by Region

Category	Jan-Mar 1970				1970/71				1971/72				1972/73			
	S	C	N	HQ	S	C	N	HQ	S	C	N	HQ	S	C	N	HQ
2 Buildings	300	-	-	-	1000	-	-	-	1000	-	-	-	2000	-	-	-
8 Personal Emoluments	1500	300	98	747	7003	1100	300	3110	6000	2000	685	3200	6000	2000	800	3200
9 Running Expenses	1200	500	53	200	7500	2000	500	830	6235	2000	500	850	6000	2000	1000	1000
TOTAL	3000	800	151	947	15503	3100	800	3940	13235	4000	1185	4050	14000	4000	1800	4200

3. LOCATION OF CONSTRUCTION

Fort Johnston District (rehabilitation of Nielsen's Fish Landing). The construction of temporary housing will be in South and Central Region lake areas.

1970/71 DEVELOPMENT ESTIMATES

PROJECT SUBMISSION

PROJECT TITLE : LOCAL COSTS, U.N.D.P.FISHERIES PROJECT

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/FISHERIES

MALAWI DEVELOPMENT ESTIMATES, 1969 : HEAD 78 ITEM 62

RELATED PROJECTS : Fisheries Development

1. FINANCIAL SUMMARY

(a) Funds Requested

	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings	-	-	1	1	2
8 Personal Emoluments	316	1,287	392	1	1,680
9 Running Costs	1,100	4,250	1,200	1	5,451
10 Special Expenditure	1,200	866	1	1	868
TOTAL	2,616	6,403	1,594	4	8,001

(b) Non-British, Non-Malawi Expenditure

Not Applicable.

(c) Previous Expenditure

	£	Cumulative Total
To 31/12/67	-	-
1968 Actual Expenditure	-	-
1969 Printed Estimates	2,995	-
1969 Revised Estimates	2,595	-
1969 Estimated Carry-forward	-	-

(d) Source of Finance

Local Resources.

2. PROJECT TARGET

To meet the minimum local costs of the joint Malawi Government/U.N.D.P. (Special Fund) Fisheries Training Project.

Expected Completion Date

The current phase of the project is due to be completed by August 1971 (two years from inception). This phase is expected to lead to a second one which will include some ongoing elements of the present project. Hence the token sums against all items in 1972/73.

3. BACKGROUND INFORMATION

The joint Malawi Government/U.N.D.P. (Special Fund) Fisheries Training Project is designed to strengthen the Fisheries Department's training programme and, in particular, includes the setting up of a Boat Building Training Unit. To this end a Plan of Operations was signed in August 1969 between the Malawi Government, U.N.D.P. and the F.A.O. The present project deals with the local costs of the Project which have to be met in accordance with the Plan of Operations. A note on the scope of the U.N.D.P. (Special Fund) Project is attached.

After the submission of Government's request for aid for the project in early 1968, F.A.O., as executing agency for U.N.D.P. suggested, and Government agreed to, certain extra staff and equipment for the project. This has produced certain increases in the 'local' costs compared with those estimated in 1968.

4. PROPOSED WORK 1970/73

This project will meet the following elements of the U.N.D.P. (Special Fund) Project:

(i) Local freight charges on donated equipment,

(ii) Costs of counterpart staff not covered under other items of the Government Estimates,

(iii) Running costs of project equipment and travelling allowances etc. for staff at (ii) above.

(iv) Cash contributions towards the cost of expatriate experts provided by the U.N. D.P. (Special Fund) Project.

5. JUSTIFICATION FOR PROPOSED WORK

The payments and services provided for under this project are a Government obligation in terms of the Plan of Operations of the U.N.D.P. (Special Fund) Fisheries Training Project.

6. EXECUTION AND SUPERVISION

The Fisheries Training Project, of which this is part, is jointly executed by F.A.O. (on behalf of U.N.D.P.) and the Malawi Government. It is supervised by a Project Manager appointed by F.A.O. and a Project Co-Manager appointed by the Malawi Government.

NOTE ON THE FISHERIES TRAINING PROJECT

1. The Fisheries Training Project is a joint effort to which the contributors are the United Nations Special Fund, the Government of the Kingdom of Denmark, and the Malawi Government. The FAO is the UN executing agency for the project and the Danish assistance is also administered by F.A.O.

2. The total cost of the project, including values put on contributions in kind, is US $ 607,488. (£253,120).

3. The aims of the project are as follows :-

(a) to continue and to expand the existing training of fishermen and to improve teaching and fishing techniques;

(b) to expand the training of Departmental extension officers;

(c) to establish a boat-building training centre;

(d) to establish a training course for semi-skilled mechanics in marine equipment;

(e) to examine the possibilities for pisciculture.

4. Trainees include Government staff, practising fishermen, practising and apprentice boat builders, and others associated with the fishing industry.

5. The project is centred at the Fisheries training centre at Mpwepwe in the Fort Johnston District and Phase I will last for two years, to be followed by a second phase, the details of which are being drafted.

6. The United Nations Special Fund provides the skilled resident staff in the fields of fishing gear technology, boat-building and engineering, and consultants in boat design and fish culture. It also provides fellowships for training overseas, equipment for the project and three senior staff houses for the use of the U.N. staff.

7. The grant from the Danish Government meets the capital costs of building and equipping the boat building yard and the running costs for the first two years of operation.

8. The Malawi Government provides the land, certain buildings and equipment, counterpart staff and the local support costs of the Project.

9. The Item under Development Account entitled "Local Costs, U.N.D.P. Fisheries Project" meets that part of the Malawi Government contribution which is not already provided for either under the Estimates on Revenue Account or elsewhere in the Development Account Estimates.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMSSION.

PROJECT TITLE : LOCAL COSTS, U.N.D.P. FISHERIES PROJECT

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/FISHERIES

MALAWI DEVELOPMENT ESTIMATES, 1969 : HEAD 78 ITEM 62

1. PROJECT OFFICER : Chief Fisheries Officer

2. FINANCIAL DETAILS

(a) Details of Expenditure	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings	(1)	-	-	1	1	2
8 Personal Emoluments						
Boat Builder	(2)	101	410	106	1	517
Fish Ranger	(3)	101	410	106		516
Mechanic	(4)	39	166	101		267
Store-Keeper Clerk	(5)	39	157	42		199
Messenger	(6)	18	72	19		91
Non-Established Staff	(7)	18	72	18		90
		316	1,287	392	1	1,680
9 Running Expenses	(8)	1,100	4,250	1,200	1	5,451
10 Special Expenditure Cash Contribution	(9)	1,200	866	1	1	868
TOTAL		2,616	6,403	1,594	4	8,001

(b) Notes on Expenditure

General

The current phase of the project is scheduled to cease about August 1971 but it is intended that it will be followed by a second phase the detail for which is being formulated during the present project. Expenditure listed in the columns above covers the commitment to the current phase only. It is anticipated that with expansion into Phase II at the end of 1971 the total expenditure in 1971/72 will be of the order of £12,000 and in 1972/73, £15,000. Expenditure past the end of the current phase is represented by token figures of £1 against each item.

(1) Buildings: Token provision for buildings required in Phase II.

(2) Boat Builder: A trainee technical officer to act as counterpart to U.N. Expert.

(3) Fish Ranger: A trainee technical officer to act as counterpart to the U.N. Gear Technologist.

(4) Mechanic: A trainee technical assistant to act as counterpart to U.N. Marine Mechanic, with provision for possible promotion.

(5) Store-Keeper Clerk:
(6) Messenger:
(7) Non-Established Staff:

} To service the increased staff at Mpwepwe resulting from the U.N.D.P. Spetial Fund Project.

(8) Running Expenses: To include local freight charges on donated equipment, running costs of that equipment, transport and other costs of above staff etc.

(9) Cash Contribution: The percentage cash payment required by the U.N.D.P. on the costs of expatriate experts at 3% of estimated costs.

1970/71 DEVELOPMENT ESTIMATES
PROJECT SUBMISSION

PROJECT TITLE	:	TIMBER PLANTATIONS
RESPONSIBLE MINISTRY/DEPARTMENT	:	NATURAL RESOURCES/FORESTRY & GAME
MALAWI DEVELOPMENT ESTIMATES, 1969	:	HEAD 79 ITEM 1
BRITISH AIDED PROJECT NO.	:	27
RELATED PROJECTS	:	Sawmilling

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings*	-	10,750	8,400	7,200	26,350
4 Roads and Bridges	-	5,450	5,900	6,300	17,650
6 Plant and Vehicles	910	15,630	15,300	21,060	51,990
7 Other Equipment	1,070	4,290	7,070	7,550	18,910
8 Personal Emoluments	34,273	129,182	137,253	141,499	407,934
9 Running Expenses	7,091	29,380	30,025	30,940	90,345
TOTAL	43,344	194,682	203,948	214,549	613,179
*21 Houses	-	9,850	8,150	6,950	24,950
22 Other Buildings	-	900	250	250	1,400

(b) Non-British, Non-Malawi Expenditure

Telephone Equipment and Spares	-	200	200	200	600
Radio Equipment and Spares	-	150	150	150	450
Cultivating Equipment	-	75	75	75	225
Logging Equipment	-	150	175	200	525
Hickory Axe Handles	-	100	100	100	300
Explosives	-	200	250	250	700
Drill Steels	-	100	100	100	300
Rock Drills and Compressor Spares	-	400	400	400	1,200
Tree Seed	-	200	200	200	600
Insecticide & Fertiliser	-	100	100	100	300
TOTAL	-	1,675	1,750	1,775	5,200

(c) Previous Expenditure

		Cumulative Total
to 31/12/65	192,703	192,703
1966	199,774	392,477
1967	209,414	601,891
1968	208,382	810,273
1969 Printed Estimates	204,467	
1969 Revised Estimates	199,568	
1969 Estimated Carry-forward included in Jan-Mar 1970	1,980	

(d) Source of Finance

U.K. Development Loan

2. PROJECT TARGET

To establish plantations of softwood and hardwood trees to provide sufficient saw logs to make Malawi self-sufficient in construction timber.

Expected Completion Date

Continuing project, the costs of which will ultimately be fully recovered from sales.

3. BACKGROUND INFORMATION

In accordance with the Government's policy, aimed at eliminating imports of wood products or imports of materials which wood products can satisfactorily replace, this project provides for the continuation of planting both softwood and hardwood timber.

The forecast upon which the 1969 and previous years programmes have been based was the creation of 72,000 acres of timber plantations by 1990. In 1969 the total acreage of timber plantations is 32,000 leaving 40,000 acres to be established over the 20 years from 1970 to 1990, a planting programme of 2,000 acres per annum.

The timber requirement forecasts are based, as stated above, on Malawi's internal timber requirements. Mr. A. Sundelin (UNDP consultant) has proposed however that the Vipya Pulpwood project investment study must include the possibility of integrating sawmill and/or plywood manufacture with the pulp/paper mill. Such integrated sawmills would have lower operating costs than non-integrated sawmills because mill waste would find a market as supplementary raw material for the pulp mill, and power and maintenance costs could be shared with the pulp mill. He considers, subject to the investigations to be carried out in 1970, that it is likely that sawn timber and/or plywood could then be exported from the Vipya to surrounding countries competitively. This question, however, cannot be resolved until after the UNDP study is completed in 1970, and cannot therefore effect the 1970/71 planting programmes. A reduced target of 1,500 acres is therefore proposed for 1970/71, but the 1971/72 target of approximately 2,000 acres will be reinstated.

4. PROPOSED WORK 1970/73

The proposed programme of new planting in acres is as follows:

Station	1970/71	1971/72	1972/73	
Zomba Mountain	250	300	450	Softwood
Ndirande (Blantyre)	80	100	70	Softwood
Massenjere (Chikwawa)	20	100	100	Hardwood
Dedza Mountain	150	180	180	Hardwood
Chongoni (Dedza)	800	1,000	1,000	Softwood
Bunda (Lilongwe)	200	200	200	Hardwood
TOTAL	1,500	1,880	2,000	

In addition to new planting, the maintenance and protection of existing plantations must continue. Acreages in this category will be 33,500 in 1970/71 (32,000 + 1,500 to be planted early 1970), 35,000 in 1971/72 and 36,880 in 1972/73.

Maintenance and protection work includes weeding of young plantations, pruning, thinning, felling, replanting of felled areas, maintenance of buildings and roads and protection measures against fire and other destructive agencies.

5. JUSTIFICATION FOR PROPOSED WORK

The project is intended to make Malawi self-sufficient in industrial timber by 1990, gradually replacing imports of timber products (excluding paper and paper products). The landed value of imports of timber in 1968 was £160,000.

The planting programme of 1,500 acres in 1970/71 would, if continued at the same level in future years, lead to a shortfall in 1990 on the best information now available. The planting target of approximately 2,000 acres has therefore been re-introduced for 1971/72. As can be seen below the production of timber will lag behind imports probably until after 1975, but if a larger planting programme had been undertaken in the 1940's and 1950's this situation would not have arisen.

The following table gives an estimate of revenue likely to accrue from yields of softwood timber at intervals over the next 20 years, including actual figures for 1967 and 1968 and estimates for each successive year up to 1971. The proportion of higher value timber rises sharply when major clear fellings commence in 1980 and after this date an average value (based on present day prices) of 12/- per cubic foot has been taken.

Year	Outturn cu.ft. Sawn	Value of Outturn £.
1967	156,424	70,638 (actual)
1968	203,000	107,000 (actual)
1969	240,000	126,000
1970	280,000	147,000
1971	300,000	157,500
and then as follows:-		
1973	500,000	262,500
1975	700,000	367,500

(c) Import Content

See separate schedule for Agriculture.

(d) Breakdown of Expenditure by Region

All in Southern Region.

3. LOCATION OF CONSTRUCTION

A boatyard and ancillary facilities are being built at Mpwepwe, Fort Johnston, in connection with this project, financed by a grant from the Danish Government through the F.A.O.

HEAD 79

FORESTRY AND GAME

Year	Outturn cu.ft. Sawn	Value of Outturn £.
1980	2,000,000	1,200,000
1985	3,600,000	2,160,000
1990	6,000,000	3,600,000

The above figures are in respect of material suitable for conversion to sawn timber only, and exclude considerable quantities of other timber products such as poles and firewood which find a ready market.

6. EXECUTION AND SUPERVISION

All works including roads and buildings to be carried out by the Department of Forestry and Game.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : TIMBER PLANTATIONS

RESPONSIBLE MINISTRY/DEPARTMENT : NATURAL RESOURCES/FORESTRY & GAME

MALAWI DEVELOPMENT ESTIMATES, 1969 : HEAD 79 ITEM 1

BRITISH AIDED PROJECT NO. : 27

1. PROJECT OFFICER : The Conservator of Forests (Operation through Regional Officers and station Technical officers.

2. FINANCIAL DETAILS

(a) Details of Expenditure	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs
2 Buildings(M)						
Housing	(1)	-	9,850	8,150	6,950	24,9
Other Buildings	(2)	-	900	250	250	1,4
		-	10,750	8,400	7,200	26,3
4 Roads and Bridges (M)	(3)	-	5,450	5,900	6,300	17,6
6 Plant and Vehicles						
Landrovers	(4)	910	3,010	3,010	2,870	8,8
25/30cwt.Pick-ups	(5)	-	1,185	1,185	-	2,3
5 Ton Vehicles	(6)	-	3,460	5,190	5,190	13,8
Crawler Tractors	(7)	-	-	2,800	5,600	8,4
Wheeled Tractors	(8)	-	4,905	1,315	5,300	11,5
Trailers	(9)	-	600	600	600	1,8
Vehicular attachments and other plant	(10)	-	2,470	1,200	1,500	5,1
		910	15,630	15,300	21,060	51,9
7 Other Equipment						
Protective clothing	(11)	-	800	1,000	1,200	3,0
Fire fighting equipment	(12)	564	1,430	2,360	2,290	6,0
Fire fighting communications	(13)	56	400	1,600	1,950	3,9
Polythene planting pockets	(14)	-	-	900	900	1,8
Cultivating equipment	(15)	-	210	200	200	6
Surveying equipment	(16)	-	-	50	50	1
Other equipment and special tools	(17)	450	1,450	960	960	3,3
		1,070	4,290	7,070	7,550	18,9

REPUBLIC OF MALAWI

DEPARTMENT OF FORESTRY AND GAME DEVELOPMENT PROGRAMME

Vipya Pulpwood Scheme

Timber Plantations

Sawmills and Timber Depots

Game

CHITIPA

KARONGA

UNITED REPUBLIC OF TANZANIA

Malawi National Park Nyika

Vwasa Proposed National Park

RUMPHI

LAKE MALAWI

MZUZU

NKHATA BAY

Vipya Pulpwood Scheme

Chikangawa Sawmill

Timber Depot

MZIMBA

Chisasira Eucalypt Area

Luwawa F.R.

REPUBLIC OF ZAMBIA

Kasungu Game Reserve

KASUNGU

Nkhotakota Game Reserve

NKHOTA KOTA

Nchesi F.R.

NTCHISI

DOWA

SALIMA

MCHINJI

Namilombwa Timber Depot

LILONGWE

Bunda F.R.

Dedza F.R.

Chongoni F.R.

DZA Sawmill

Dyalanyama F.R. (Part)

Cape Maclear F.R. (Proposed)

Nkudzi Hill F.R. (Proposed)

Nkapola F.R. (Proposed)

FORT JOHNSTON

NGHEU

Liwonde Game Reserve

(Under Construction)

MOZAMBIQUE

MZUZU
Vipya
Pulpwood
Scheme
NKHATA BAY
Chikangawa Sawmill
Timber Depot
MZIMBA
Chisasira Eucalypt Area
Luwawa F.R.
REPUBLIC OF ZAM
MALAWI
MOÇAMBIQUE
Kasungu
Game
Reserve
KASUNGU
Nkhotakota
Game
Reserve
NKHOTA KOTA
Nchesi F.R.
NTCHI
DOWA
SALIMA
MCHINJI
Namilombwa Timber Depot
LILONGWE
Bunda F.R.
Dedza F.R.
Chongoni F.R.
Sawmill
Dyalanyama F.R. (Part)
Cape Maclear F.R. (Proposed)
Nkudzi Hill F.R. (Proposed)
Nkapola F.R. (Proposed)
FORT JOHNSTON
NCHEU
Liwonde Game Reserve (Proposed)
(Under Construction)
KASUPE
Zomba F.R.
Sawmill
ZOMBA
Sawmill
Ndirande F.R.
Kanjedza F.R.
Chigumula F.R.
Amalika F.R.
Mlanje F.R.
Majete Game Reserve
CHIKWAWA
CHOLO
Lengwe Game Reserve
Cholomwani F.R.
Masenjere F.R.
Mwabvi Game Reserve
NSANJE
SCALE
MILES
20 10 0 20 40 60
Boundaries—International
District
Railways
Principal Roads

REPUBLIC OF MALAWI

SHOWING PRINCIPAL FISHING AREAS AND THE MOVEMENT OF FISH TO THE MAIN MARKETS.

20 0 20 40 60
Miles

- Towns
- Fisheries Department offices
- x Permanent recording check points
- Fisheries Training School
- Fisheries Research Station
- Fisheries Research Substation
- Rivers and Lakeshores
- (Important fishing areas hatched)
- Main Fish trade routes
- 8,600 s.t Estimate of annual landings in short tons (heighest of 1966–68)
- Marsh

DEPARTMENT OF FISHERIES

CHITIPA

KARONGA

Chilumba

RUMPI

Usisya

MZUZU

1,400s.t

NKHATA BAY

MZIMBA

300 s.t.

Likoma Island

1,700 s.t.

NKHOTA KOTA

KASUNGU

NTCHISI

400 s.t.

Domira Bay

DOWA

SALIMA

MCHINJI

LILONGWE

1,700 s.t.

Monkey Bay

4,700 s.t.

Mpwepwe

DEDZA

JOHNSTON

LAKE MALOMBE
8,600 s.t.

200 s.t.

NCHEU

Northern Region

Deep water up to 2280 ft, relatively unproductive, fishery limited to narrow coastal strip. Potential not considered to be high but but some possibilities at Chilumba, Karonga and Usisya. Area produces good fishermen who do well elsewhere.

Likoma Island

Enclave in Mozambique, productive relative to Northern waters generally, but development difficult due to local circumstances.

Nkhotakota and Domira Bay

Present indications are that this area is less productive than the southern lake but more so than the north. Once the trawl–fishery in the S.E. Arm is developed it is possible that the greatest potential for development may be here and the South West Arm. Gill–nets and shore seines are the methods mainly used, the species caught are as in S.E. Arm. New lakeshore roads will induce development.

The South East Arm

The most highly developed and productive area of Lake Malawi. Until 1968 the main commercial fishing was gill–netting and expatriate managed ring–netting. The chirimila, a traditional open–water seine–net introduced from the Northern Region is increasing in importance and beach seines are also used. The development of trawl–net fishing, commenced in 1968, is expected to increase landings by over 75 percent of the previously recorded figures. The fish caught are, in order of importance, tilapia (marketed fresh, smoked or dried) utaka and chisawasawa (small fish usually dried), and catfish (often smoked).

Lake Malombe and Upper Shire

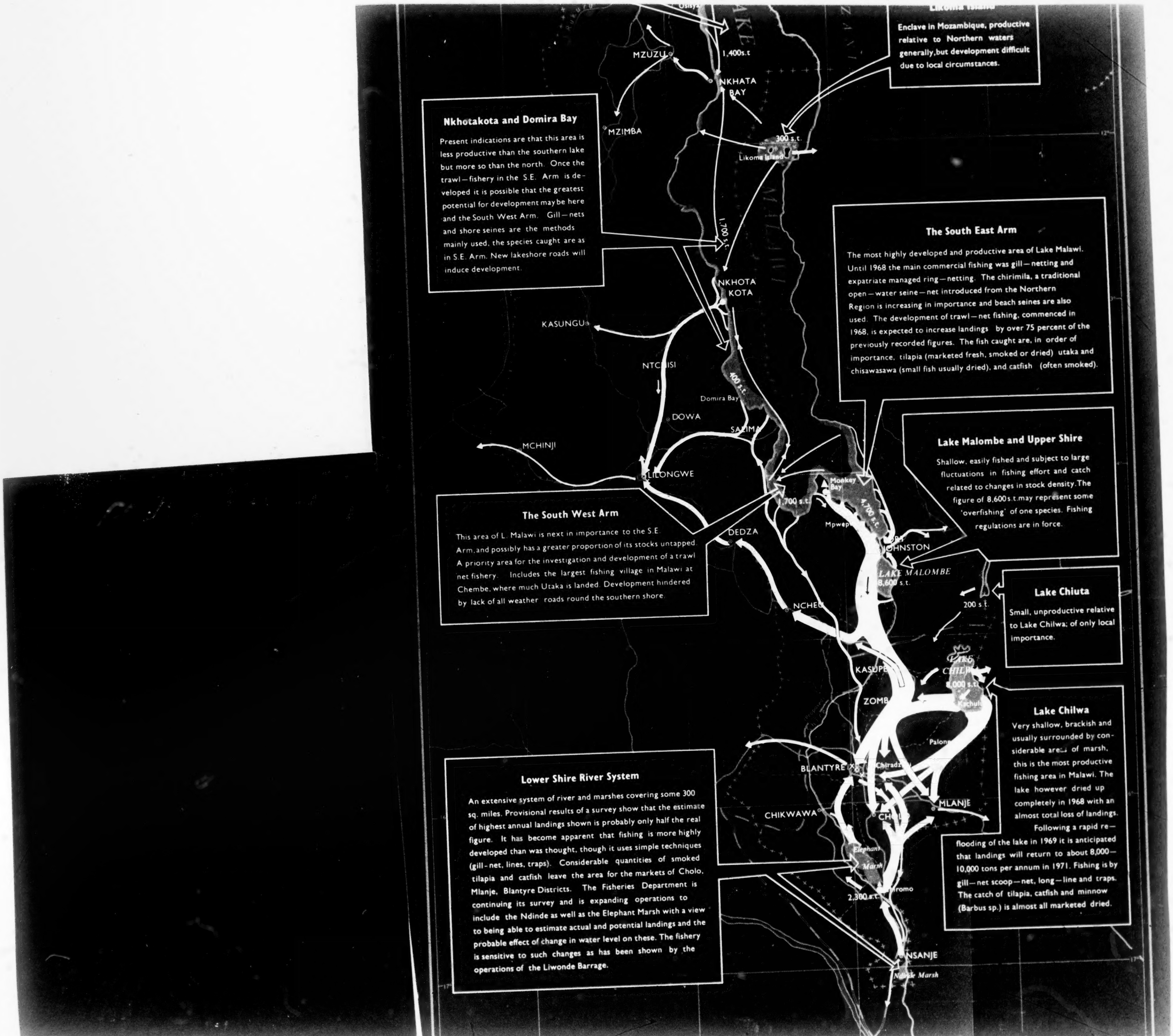
Shallow, easily fished and subject to large fluctuations in fishing effort and catch related to changes in stock density. The figure of 8,600 s.t. may represent some 'overfishing' of one species. Fishing regulations are in force.

The South West Arm

This area of L. Malawi is next in importance to the S.E. Arm, and possibly has a greater proportion of its stocks untapped. A priority area for the investigation and development of a trawl net fishery. Includes the largest fishing village in Malawi at Chembe, where much Utaka is landed. Development hindered by lack of all weather roads round the southern shore.

Lake Chiuta

Small, unproductive relative to Lake Chilwa; of only local importance.


Enclave in Mozambique, productive relative to Northern waters generally, but development difficult due to local circumstances.
MZUZU
1,400s.t
NKHATA BAY
Nkhotakota and Domira Bay
Present indications are that this area is less productive than the southern lake but more so than the north. Once the trawl—fishery in the S.E. Arm is developed it is possible that the greatest potential for development may be here and the South West Arm. Gill—nets and shore seines are the methods mainly used, the species caught are as in S.E. Arm. New lakeshore roads will induce development.
MZIMBA
300 s.t.
Likoma Island
1,700 s.t.
The South East Arm
The most highly developed and productive area of Lake Malawi. Until 1968 the main commercial fishing was gill—netting and expatriate managed ring—netting. The chirimila, a traditional open—water seine—net introduced from the Northern Region is increasing in importance and beach seines are also used. The development of trawl—net fishing, commenced in 1968, is expected to increase landings by over 75 percent of the previously recorded figures. The fish caught are, in order of importance, tilapia (marketed fresh, smoked or dried) utaka and chisawasawa (small fish usually dried), and catfish (often smoked).
NKHOTA KOTA
KASUNGU
NTCHISI
400 s.t.
Domira Bay
DOWA
SALIMA
MCHINJI
LILONGWE
Lake Malombe and Upper Shire
Shallow, easily fished and subject to large fluctuations in fishing effort and catch related to changes in stock density. The figure of 8,600 s.t. may represent some 'overfishing' of one species. Fishing regulations are in force.
Monkey Bay
1,700 s.t.
4,700 s.t.
Mpwepwe
The South West Arm
This area of L. Malawi is next in importance to the S.E. Arm, and possibly has a greater proportion of its stocks untapped. A priority area for the investigation and development of a trawl net fishery. Includes the largest fishing village in Malawi at Chembe, where much Utaka is landed. Development hindered by lack of all weather roads round the southern shore.
DEDZA
JOHNSTON
LAKE MALOMBE
8,600 s.t.
NCHEU
200 s.t.
Lake Chiuta
Small, unproductive relative to Lake Chilwa; of only local importance.
KASUPE
LAKE CHILWA
8,000 s.t.
Kachulu
ZOMBA
Palone
Chiradzulu
BLANTYRE
MLANJE
CHIKWAWA
Lake Chilwa
Very shallow, brackish and usually surrounded by considerable areas of marsh, this is the most productive fishing area in Malawi. The lake however dried up completely in 1968 with an almost total loss of landings.
Following a rapid re—flooding of the lake in 1969 it is anticipated that landings will return to about 8,000—10,000 tons per annum in 1971. Fishing is by gill—net scoop—net, long—line and traps. The catch of tilapia, catfish and minnow (Barbus sp.) is almost all marketed dried.
Elephant Marsh
Lower Shire River System
An extensive system of river and marshes covering some 300 sq. miles. Provisional results of a survey show that the estimate of highest annual landings shown is probably only half the real figure. It has become apparent that fishing is more highly developed than was thought, though it uses simple techniques (gill-net, lines, traps). Considerable quantities of smoked tilapia and catfish leave the area for the markets of Cholo, Mlanje, Blantyre Districts. The Fisheries Department is continuing its survey and is expanding operations to include the Ndinde as well as the Elephant Marsh with a view to being able to estimate actual and potential landings and the probable effect of change in water level on these. The fishery is sensitive to such changes as has been shown by the operations of the Liwonde Barrage.
2,300 s.t.
NSANJE
Ndindi Marsh

GOVERNMENT OF MALAWI

DEVELOPMENT PROGRAMME

1970—72/73

Volume II

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C O N T E N T S

Note: The layout of this book follows that of the 1970/71 Malawi Government Development Estimates, which it supplements and illustrates.

Projects are grouped by Heads of the Estimates, and appear in order of Items.

A project should be referred to by Head, title and page. Thus: "Head 79, 'Sawmilling', page 2."

SECTION 1

INTRODUCTION

General

The Development Programme 1970/71

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B: 3 years by projects
C: 1970/71 summary
D: 1970/71 by projects.

SECTION 2 (Yellow)

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Community Development
Customs & Excise
Education
Fisheries
Forestry & Game
Geological Survey
Health
Housing
Industrial Development
Justice (Traditional Courts)
Labour
Local Government
Posts & Telecommunications
Office of the President & Cabinet
Statistics
Surveys
Trade and Industry
Transport
Veterinary Services
Water Supplies & Sanitation
Works Organisation and Overheads

SECTION 3 (White)

DEVELOPMENT PROJECT SUBMISSIONS BY HEAD & ITEM

A list follows.

GENERAL MAP OF MALAWI

£1 Malawi (£ M) = $ 2.40.

From 1st April 1970 the Malawi Government financial year will run from 1st April to 31st March. The period 1st January 1970 - 31st March 1970 is included for estimating purposes with the previous financial year, 1st January 1969 to 31st December 1969.

8-14-72 IMF

1970/71 DEVELOPMENT PROJECT SUBMISSIONS BY HEAD AND ITEM

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11 — Supervised Credit
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	14	A.I.D. Lakeshore Road
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	17	Karonga/Chiweta Bituminization
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	3	Additional Substitute Replacement Plant & Vehicles
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	66	Development Works Staff

HEAD 78

FISHERIES

Northern Regio

Deep water up to 22
relatively unproduc
fishery limited to na
coastal strip. Potenti
considered to be hig
but some possibiliti
Chilumba, Karonga
Usisya. Area prod
good fishermen wh
well elsewhere.

Nkhotakota an

Present indications
less productive than
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REPUBLIC OF MALAWI

SHOWING PRINCIPAL FISHING AREAS AND THE MOVEMENT OF FISH TO THE MAIN MARKETS.

20 0 20 40 60
Miles

- Towns
- Fisheries Department offices
- Permanent recording check points
- Fisheries Training School
- Fisheries Research Station
- Fisheries Research Substation
- Rivers and Lakeshores (Important fishing areas hatched)
- Main Fish trade routes
- 8,600 s.t — Estimate of annual landings in short tons (heighest of 1966—68)
- Marsh

DEPARTMENT OF FISHERIES

CHITIPA

KARONGA

Chilumba

RUMPI

Usisya

MZUZU

1,400s.t

NKHATA BAY

MZIMBA

300 s.t.

Likoma Island

1,700 s.t.

NKHOTA KOTA

KASUNGU

NTCHISI

400 s.t.

Domira Bay

DOWA

SALIMA

MCHINJI

LILONGWE

Monkey Bay

1,700 s.t.

4,700 s.t.

Mpwepwe

DEDZA

JOHNSTON

LAKE MALOMBE

8,600 s.t.

200 s.t.

NCHEU

Likoma Island

Enclave in Mozambique, productive relative to Northern waters generally, but development difficult due to local circumstances.

Domira Bay

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The South East Arm

The most highly developed and productive area of Lake Malawi. Until 1968 the main commercial fishing was gill—netting and expatriate managed ring—netting. The chirimila, a traditional open—water seine—net introduced from the Northern Region is increasing in importance and beach seines are also used. The development of trawl—net fishing, commenced in 1968, is expected to increase landings by over 75 percent of the previously recorded figures. The fish caught are, in order of importance, tilapia (marketed fresh, smoked or dried) utaka and chisawasawa (small fish usually dried), and catfish (often smoked).

Lake Malombe and Upper Shire

Shallow, easily fished and subject to large fluctuations in fishing effort and catch related to changes in stock density. The figure of 8,600 s.t. may represent some 'overfishing' of one species. Fishing regulations are in force.

The South West Arm

wi is next in importance to the S.E.
as a greater proportion of its stocks untapped.
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des the largest fishing village in Malawi at
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Lake Chiuta

Small, unproductive relative to Lake Chilwa; of only local importance.

Nkhotakota and Domi

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Enclave in Mozambique, productive relative to Northern waters generally, but development difficult due to local circumstances.

MZUZU

1,400s.t

NKHATA BAY

MZIMBA

300 s.t.

Likoma Island

1,700 s.t.

NKHOTA KOTA

SUNGU

NTCHISI

400 s.t.

Domira Bay

DOWA

SALIMA

LILONGWE

1,700 s.t.

Monkey Bay

4,700 s.t.

Mpwep

DEDZA

JOHNSTON

LAKE MALOMBE
8,600 s.t.

NCHEU

200 s.t.

KASUPE

ZOMB

Palon

Chiradz

BLANTYRE

CHIKWAWA

MLANJE

Elephant Marsh

2,300 s.t.

NSANJE

Ndinde Marsh

The South East Arm

The most highly developed and productive area of Lake Malawi. Until 1968 the main commercial fishing was gill—netting and expatriate managed ring—netting. The chirimila, a traditional open—water seine—net introduced from the Northern Region is increasing in importance and beach seines are also used. The development of trawl—net fishing, commenced in 1968, is expected to increase landings by over 75 percent of the previously recorded figures. The fish caught are, in order of importance, tilapia (marketed fresh, smoked or dried) utaka and chisawasawa (small fish usually dried), and catfish (often smoked).

Lake Malombe and Upper Shire

Shallow, easily fished and subject to large fluctuations in fishing effort and catch related to changes in stock density. The figure of 8,600 s.t. may represent some 'overfishing' of one species. Fishing regulations are in force.

Lake Chiuta

Small, unproductive relative to Lake Chilwa; of only local importance.

Lake Chilwa

Very shallow, brackish and usually surrounded by considerable areas of marsh, this is the most productive fishing area in Malawi. The lake however dried up completely in 1968 with an almost total loss of landings.

Following a rapid re—flooding of the lake in 1969 it is anticipated that landings will return to about 8,000—10,000 tons per annum in 1971. Fishing is by gill—net scoop—net, long—line and traps. The catch of tilapia, catfish and minnow (Barbus sp.) is almost all marketed dried.

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is area is ern lake Once the m is de- greatest be here ill—nets thods nt are as oads will

uth West Arm

ext in importance to the S.E. ater proportion of its stocks untapped. estigation and development of a trawl e largest fishing village in Malawi at ka is landed. Development hindered ads round the southern shore.

Shire River System

f river and marshes covering some 300 esults of a survey show that the estimate ngs shown is probably only half the real e apparent that fishing is more highly ought, though it uses simple techniques Considerable quantities of smoked ave the area for the markets of Cholo, ricts. The Fisheries Department is and is expanding operations to s well as the Elephant Marsh with a view ate actual and potential landings and the nge in water level on these. The fishery changes as has been shown by the vonde Barrage.

1970/71 DEVELOPMENT ESTIMATES
PROJECT SUBMISSION

PROJECT TITLE : FISHERIES DEVELOPMENT

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/FISHERIES

MALAWI DEVELOPMENT ESTIMATES, 1969 : HEAD 78 ITEM 1

BRITISH AIDED PROJECT NO. : 26

RELATED PROJECTS : U.N.D.P. Fisheries Project

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings*	300	1,000	1,000	2,000	4,000
8 Personal Emoluments	2,645	11,513	11,885	12,000	35,398
9 Running Expenses	1,953	10,830	9,585	10,000	30,415
TOTAL	4,898	23,343	22,470	24,000	69,813
*22 Other Buildings	300	1,000	1,000	2,000	4,000

(b) Non-British, Non-Malawi Expenditure

Nil

(c) Previous Expenditure

	£	Cumulative Total
To 31/12/65	7,759	7,759
1966	15,451	23,210
1967	55,219	78,429
1968 Actual Expenditure	30,506	108,935
1969 Printed Estimates	21,964	-
1969 Revised Estimates	21,000	-
1969 Estimated Carry-forward	Nil	-

(d) Source of Finance

U.K. Development Loan.

2. PROJECT TARGET

To establish an effective Government Fisheries Service by providing staff, buildings, equipment and running expenses in the fields of training, extension and fisheries administration, complementary to those provided under Revenue Account.

Expected Completion Date:

Continuing Project. Will be transferred to Revenue Account as soon as possible.

3. BACKGROUND INFORMATION

The establishment of the Fisheries Department under Revenue Account (excluding the Fisheries Research Unit) is two Professional Officers, four Technical Officers and supporting junior staff. The Research Unit has three Professional Officers (one superscale) and two Technical Officers. The present project augments the establishment of the extension and marketing services by providing for the employment of an additional Professional Officer (Chief Fisheries Officer). two

By the end of 1969 the following building works will be completed and equipment purchased under the project:-

(i) Training School for junior departmental staff together with senior staff house in Fort Johnston District;

(ii) Senior staff house in Lower Shire River area;

(iii) Seven junior staff houses;

(iv) New jetty at Kachulu on Lake Chilwa;

(v) Feeder roads to Chembe, Mpwepwe, Namiasi, Mtundu, Chipeleka, and Chapola fishing villages (about 19 miles);

(vi) One 12 seat bus (for training schools);

(vii) Four Landrovers;

(viii) One fast launch, one fishing boat and one small air cushion vehicle (hovercraft).

The use of the staff buildings and equipment provided under the project is closely integrated with use of resources provided under Revenue Account and both are applied to the implementation of Government's declared policy aims in the fisheries field.

The most dramatic result of the investment of staff and equipment listed above has been the development of a trawl-net fishery for Lethrinops (Chisawasawa) a species of fish previously unharvested, for which a fishing method has been evolved, tested, modified to suit operations of indigenous fishermen and successfully introduced, all within 18 months of 1968 and 1969. The credit for this success goes very largely to this project. It could not have occurred without it.

4. PROPOSED WORK FOR 1970/73

The pre-entry training of all new Technical Assistant staff will continue. Rationalisation of the collection of fisheries statistics will be continued and expanded. Experimental and exploratory fishing will continue in the Southern part of Lake Malawi. These efforts will be directed particularly towards proving the extent of the Lethrinops species that could be caught by the newly developed trawl net fishery, but work on other species will continue; successful methods would be extended to the waters of the Central and Northern Regions. The premises of a former fishing company have been acquired and will be operated as a public fish landing especially for the Chisawasawa. Data collection of marketing and landing statistics will continue.

5. JUSTIFICATION FOR PROPOSED WORK

The training of junior staff is essential to produce the competent corps of extension workers on which further development of the fisheries depends. The programme of exploratory and experimental fishing will indicate fishing grounds, and methods of exploiting them, that will serve to increase total fish landings and supply more animal protein to the population. The development of a marketing system for the Chisawasawa is essential if development of the industry is not to be hampered by lack of sales outlets. The new trawl-boats land relatively large quantities of fish at one time and cannot be accommodated within a 'beach' landing system that has evolved to meet the requirements of a canoe fishery and small scale gill-netting. The rehabilitation of an existing fish landing jetty and its operation by the department as a landing and marketing facility will foster the development of the trawl-net fishery.

6. EXECUTION AND SUPERVISION

The project is executed together with work financed under Revenue Account under the overall supervision of the Chief Fisheries Officer who is provided for in this project.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMSSION

PROJECT TITLE : FISHERIES DEVELOPMENT

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/FISHERIES

MALAWI DEVELOPMENT ESTIMATES, 1969 : HEAD 78 ITEM 1

BRITISH AIDED PROJECT NO. : 26

1. PROJECT OFFICER : Chief Fisheries Officer

2. FINANCIAL DETAILS

(a) Details of Expenditure	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TO 3
2 Buildings (M)	(1)	300	1,000	1,000	2,000	4,
8 Personal Emoluments						
Chief Fisheries Officer		500	2,000	2,000	2,000	6,
Fish Marketing Officer	(2)	125	500	520	540	1,
Senior Fish Ranger		293	1,276	1,276	1,280	3,
21 Fisheries Assistants	(3)	831	4,177	4,439	4,500	13,
3 Clerical Officers	(4)	122	510	550	580	1,
Non-Established Staff	(5)	774	3,050	3,100	3,100	9,
		2,645	11,513	11,885	12,000	35,
9 Running Expenses						
Transport and Travelling		475	2,000	2,000	2,000	6,
M. & R.E. Vehicles	(6)	250	1,950	1,950	1,950	5,
M. & R.E. Launches	(7)	375	1,700	1,700	1,700	5,
M. &. R.E. Plant	(8)	120	450	450	450	1,
Tools Equipment, Materials	(9)	505	2,500	2,000	2,260	6,
Temporary Buildings	(10)	-	1,000	250	400	1,
Maintenance of Buildings	(11)	- -	300	300	300	
Library	(12)	25	120	125	130	
Foodstuffs	(13)	113	450	450	450	1,
Allowance for Students	(14)	90	360	360	360	1,
		1,953	10,830	9,585	10,000	30,
TOTAL		4,898	23,343	22,470	24,000	69,

(M) = Costed for construction by the Fisheries Department.

(b) Notes on Expenditure

(1) Buildings: provision for a phased rehabilitation of Neilsen's Fishery premises which are to be managed by the Department as a fish landing for Chisawasawa.

(2) Fish Marketing Officer: it is probable that this post will be occupied at the T.O. level.

(b) Notes on Expenditure - Cont'd

(3) Fisheries Assistants: includes former provision for Senior Fisheries Assistants (H.T.A.), now in the same grade.

(4) Clerical Officers: 3 Clerical Officers dealing with fisheries statistics and general work in the Chief Fisheries Officer's Office.

(5) Non-Established Staff: includes provision for Drivers, boat crews, fish market staff and general labour.

(6) M. & R.E. Vehicles: Four Landrovers at £400 each and a school bus at £350.

(7) M. & R.E. Launches: one launch at £700, one at £400 and one at £600. (The increased maintenance costs due to granting a maintenance contract to Malawi Railways are covered under Revenue Account).

(8) M. & R.E. Plant: for the maintenance of water pumping plant at the Fisheries Assistants' Training School.

(9) Tools, Equipment and Materials: for the maintenance and replacement of fishing gear, teaching equipment, demonstration materials, cleaning and other materials at the new fish landing.

(10) Construction and Maintenance of Temporary Buildings: the expanding programme of statistics and increased extension work require that temporary housing be built on fishing beaches for staff. This will enable the Department's work to be related to the fishery directly rather than based on the distribution of limited permanent housing.

(11) Maintenance of Buildings: for the maintenance of permanent buildings provided for under the project.

(12) Library: for books and periodicals for the training school.

(13) Foodstuffs: for feeding trainees at 2/- per diem for 300 days per annum.

(14) Allowances: £2 per month for each of 15 trainees.

(c) Import Content

See separate schedule for Ministry of Agriculture.

(c) Breakdown of Expenditure by Region

Category	Jan-Mar 1970				1970/71				1971/72				1972/73			
	S	C	N	HQ	S	C	N	HQ	S	C	N	HQ	S	C	N	HQ
2 Buildings	300	-	-	-	1000	-	-	-	1000	-	-	-	2000	-	-	-
8 Personal Emoluments	1500	300	98	747	7003	1100	300	3110	6000	2000	685	3200	6000	2000	800	3200
9 Running Expenses	1200	500	53	200	7500	2000	500	830	6235	2000	500	850	6000	2000	1000	1000
TOTAL	3000	800	151	947	15503	3100	800	3940	13235	4000	1185	4050	14000	4000	1800	4200

3. LOCATION OF CONSTRUCTION

Fort Johnston District (rehabilitation of Nielsen's Fish Landing). The construction of temporary housing will be in South and Central Region lake areas.

1970/71 DEVELOPMENT ESTIMATES
PROJECT SUBMISSION

PROJECT TITLE : LOCAL COSTS, U.N.D.P.FISHERIES PROJECT

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/FISHERIES

MALAWI DEVELOPMENT ESTIMATES, 1969 : HEAD 78 ITEM 62

RELATED PROJECTS : Fisheries Development

1. FINANCIAL SUMMARY

(a) Funds Requested

	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings	-	-	1	1	2
8 Personal Emoluments	316	1,287	392	1	1,680
9 Running Costs	1,100	4,250	1,200	1	5,451
10 Special Expenditure	1,200	866	1	1	868
TOTAL	2,616	6,403	1,594	4	8,001

(b) Non-British, Non-Malawi Expenditure

Not Applicable.

(c) Previous Expenditure

	£	Cumulative Total
To 31/12/67	-	-
1968 Actual Expenditure	-	-
1969 Printed Estimates	2,995	-
1969 Revised Estimates	2,595	-
1969 Estimated Carry-forward	-	-

(d) Source of Finance

Local Resources.

2. PROJECT TARGET

To meet the minimum local costs of the joint Malawi Government/U.N.D.P. (Special Fund) Fisheries Training Project.

Expected Completion Date

The current phase of the project is due to be completed by August 1971 (two years from inception). This phase is expected to lead to a second one which will include some ongoing elements of the present project. Hence the token sums against all items in 1972/73.

3. BACKGROUND INFORMATION

The joint Malawi Government/U.N.D.P. (Special Fund) Fisheries Training Project is designed to strengthen the Fisheries Department's training programme and, in particular, includes the setting up of a Boat Building Training Unit. To this end a Plan of Operations was signed in August 1969 between the Malawi Government, U.N.D.P. and the F.A.O. The present project deals with the local costs of the Project which have to be met in accordance with the Plan of Operations. A note on the scope of the U.N.D.P. (Special Fund) Project is attached.

After the submission of Government's request for aid for the project in early 1968, F.A.O., as executing agency for U.N.D.P. suggested, and Government agreed to, certain extra staff and equipment for the project. This has produced certain increases in the 'local' costs compared with those estimated in 1968.

4. PROPOSED WORK 1970/73

This project will meet the following elements of the U.N.D.P. (Special Fund) Project:

(i) Local freight charges on donated equipment,

(ii) Costs of counterpart staff not covered under other items of the Government Estimates,

(iii) Running costs of project equipment and travelling allowances etc. for staff at (ii) above.

(iv) Cash contributions towards the cost of expatriate experts provided by the U.N. D.P. (Special Fund) Project.

5. JUSTIFICATION FOR PROPOSED WORK

The payments and services provided for under this project are a Government obligation in terms of the Plan of Operations of the U.N.D.P. (Special Fund) Fisheries Training Project.

6. EXECUTION AND SUPERVISION

The Fisheries Training Project, of which this is part, is jointly executed by F.A.O. (on behalf of U.N.D.P.) and the Malawi Government. It is supervised by a Project Manager appointed by F.A.O. and a Project Co-Manager appointed by the Malawi Government.

NOTE ON THE FISHERIES TRAINING PROJECT

1. The Fisheries Training Project is a joint effort to which the contributors are the United Nations Special Fund, the Government of the Kingdom of Denmark, and the Malawi Government. The FAO is the UN executing agency for the project and the Danish assistance is also administered by F.A.O.

2. The total cost of the project, including values put on contributions in kind, is US $ 607,488. (£253,120).

3. The aims of the project are as follows :-

(a) to continue and to expand the existing training of fishermen and to improve teaching and fishing techniques;

(b) to expand the training of Departmental extension officers;

(c) to establish a boat-building training centre;

(d) to establish a training course for semi-skilled mechanics in marine equipment;

(e) to examine the possibilities for pisciculture.

4. Trainees include Government staff, practising fishermen, practising and apprentice boat builders, and others associated with the fishing industry.

5. The project is centred at the Fisheries training centre at Mpwepwe in the Fort Johnston District and Phase I will last for two years, to be followed by a second phase, the details of which are being drafted.

6. The United Nations Special Fund provides the skilled resident staff in the fields of fishing gear technology, boat-building and engineering, and consultants in boat design and fish culture. It also provides fellowships for training overseas, equipment for the project and three senior staff houses for the use of the U.N. staff.

7. The grant from the Danish Government meets the capital costs of building and equipping the boat building yard and the running costs for the first two years of operation.

8. The Malawi Government provides the land, certain buildings and equipment, counterpart staff and the local support costs of the Project.

9. The Item under Development Account entitled "Local Costs, U.N.D.P. Fisheries Project" meets that part of the Malawi Government contribution which is not already provided for either under the Estimates on Revenue Account or elsewhere in the Development Account Estimates.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMSSION.

PROJECT TITLE : LOCAL COSTS, U.N.D.P. FISHERIES PROJECT

RESPONSIBLE MINISTRY/DEPARTMENT : AGRICULTURE/FISHERIES

MALAWI DEVELOPMENT ESTIMATES, 1969 : HEAD 78 ITEM 62

1. PROJECT OFFICER : Chief Fisheries Officer

2. FINANCIAL DETAILS

(a) Details of Expenditure	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings	(1)	-	-	1	1	2
8 Personal Emoluments						
Boat Builder	(2)	101	410	106	1	517
Fish Ranger	(3)	101	410	106		516
Mechanic	(4)	39	166	101		267
Store-Keeper Clerk	(5)	39	157	42		199
Messenger	(6)	18	72	19		91
Non-Established Staff	(7)	18	72	18		90
		316	1,287	392	1	1,680
9 Running Expenses	(8)	1,100	4,250	1,200	1	5,451
10 Special Expenditure Cash Contribution	(9)	1,200	866	1	1	868
TOTAL		2,616	6,403	1,594	4	8,001

(b) Notes on Expenditure

General

The current phase of the project is scheduled to cease about August 1971 but it is intended that it will be followed by a second phase the detail for which is being formulated during the present project. Expenditure listed in the columns above covers the commitment to the current phase only. It is anticipated that with expansion into Phase II at the end of 1971 the total expenditure in 1971/72 will be of the order of £12,000 and in 1972/73, £15,000. Expenditure past the end of the current phase is represented by token figures of £1 against each item.

(1) Buildings: Token provision for buildings required in Phase II.

(2) Boat Builder: A trainee technical officer to act as counterpart to U.N. Expert.

(3) Fish Ranger: A trainee technical officer to act as counterpart to the U.N. Gear Technologist.

(4) Mechanic: A trainee technical assistant to act as counterpart to U.N. Marine Mechanic, with provision for possible promotion.

(5) Store-Keeper Clerk:
(6) Messenger:
(7) Non-Established Staff:

To service the increased staff at Mpwepwe resulting from the U.N.D.P. Spetial Fund Project.

(8) Running Expenses: To include local freight charges on donated equipment, running costs of that equipment, transport and other costs of above staff etc.

(9) Cash Contribution: The percentage cash payment required by the U.N.D.P. on the costs of expatriate experts at 3% of estimated costs.

(c) Import Content

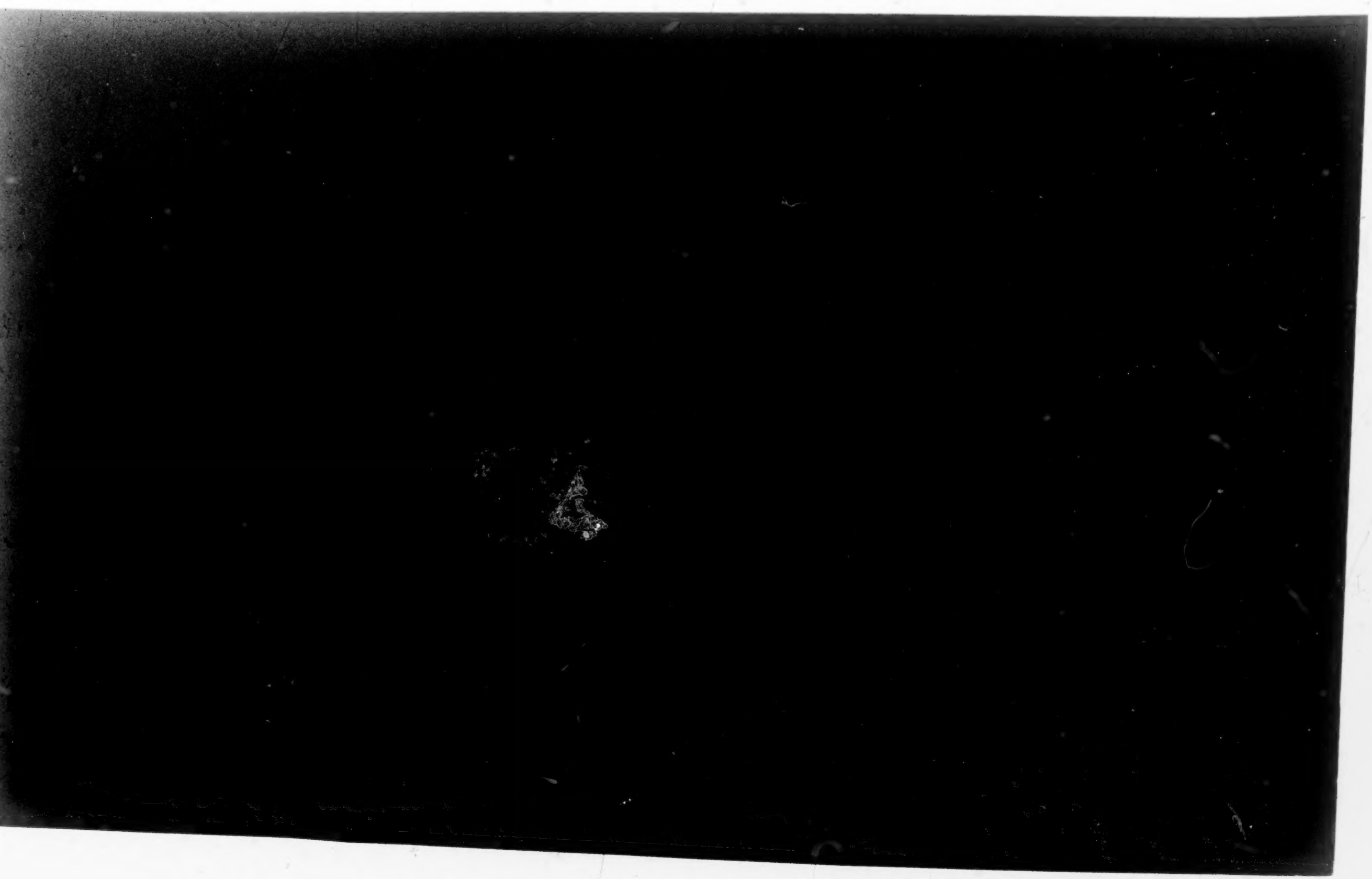
See separate schedule for Agriculture.

(d) Breakdown of Expenditure by Region

All in Southern Region.

3. LOCATION OF CONSTRUCTION

A boatyard and ancillary facilities are being built at Mpwepwe, Fort Johnston, in connection with this project, financed by a grant from the Danish Government through the F.A.O.



HEAD 79

FORESTRY AND GAME

Kasungu
Game
Reserve
KAS
MCHINJI
Dyalanya
(Part
15°

REPUBLIC OF MALAWI

DEPARTMENT OF FORESTRY AND GAME DEVELOPMENT PROGRAMME

Vipya Pulpwood Scheme

Timber Plantations

Sawmills and Timber Depots

Game

34° 35°

UNITED REPUBLIC OF TANZANIA

LAKE MALAWI

MOCAMBIQUE

HITIPA

KARONGA

RUMPI

MZUZU

NKHATA BAY

MZIMBA

NKHOTA KOTA

NTCHISI

DOWA

SALIMA

LILONGWE

NGHEU

FORT JOHNSTON

11°

12°

13°

14°

15°

Malawi National Park Nyika

Vwasa Proposed National Park

Vipya Pulpwood Scheme

Chikangawa Sawmill

Timber Depot

Chisasira Eucalypt Area

Luwawa F.R.

Nkhotakota Game Reserve

Nchesi F.R.

Namilombwa Timber Depot

Cape Maclear F.R. (Proposed)

Nkudzi Hill F.R. (Proposed)

Nkapola F.R. (Proposed)

Bunda F.R.

Dedza F.R.

Chongoni F.R.

Dedza Sawmill

Liwonde Game Reserve (Proposed)

(Under Construction)

Timber Depo
MZIM
Kasungu
Game
Reserve
MCHINJI
Dyalanyama F.R.
(Part)
MOCAMBI
SCALE
MILES
20 10 0 20
Boundaries — International
District
Railways
Principal Roads
15°
16°
17°
33°

Vipya

Pulpwood

Scheme

Chisasira Eucalypt Area

Luwawa F.R.

NKHATA BAY

MALAWI

Nkhotakota

Game

Reserve

NKHOTA KOTA

Nchesi F.R.

NTCHI

DOWA

SALIMA

MOCAMBIQUE

Namilombwa

Cape Maclear F.R. (Proposed)

Nkudzi Hill F.R. (Proposed)

Nkapola F.R. (Proposed)

Bunda F.R.

Dedza F.R.

Chongoni F.R.

Sawmill

FORT JOHNSTON

Liwonde Game Reserve (Proposed)

(Under Construction)

NCHEU

KASUPE

Zomba F.R.

Sawmill

ZOMBA

Sawmill

Ndirande F.R.

BLANTYRE

LIMBE

Kaniedza F.R.

Mlanje F.R.

Chigumula F.R.

Amalika F.R.

Majete Game Reserve

CHIKWAWA

CHOLO

Lengwe Game Reserve

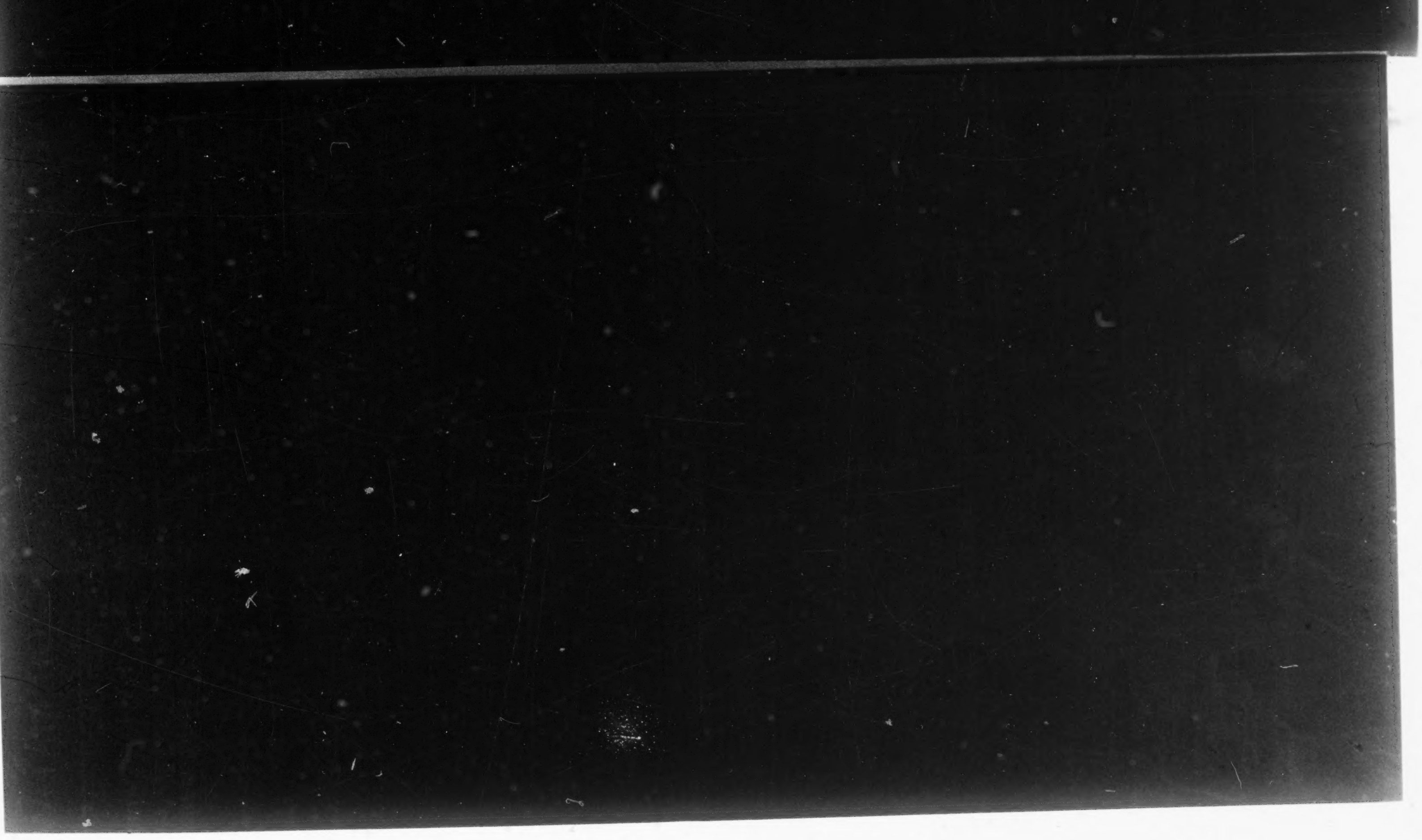
Cholomwani F.R.

Maserjere F.R.

Mwabvi Game Reserve

NSANJE

Drawn and Printed by the Department of Surveys, Malawi. February 1970.



1970/71 DEVELOPMENT ESTIMATES
PROJECT SUBMISSION

PROJECT TITLE	:	TIMBER PLANTATIONS
RESPONSIBLE MINISTRY/DEPARTMENT	:	NATURAL RESOURCES/FORESTRY & GAME
MALAWI DEVELOPMENT ESTIMATES, 1969	:	HEAD 79 ITEM 1
BRITISH AIDED PROJECT NO.	:	27
RELATED PROJECTS	:	Sawmilling

1. FINANCIAL SUMMARY

(a) Funds Requested

Category	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings*	-	10,750	8,400	7,200	26,350
4 Roads and Bridges	-	5,450	5,900	6,300	17,650
6 Plant and Vehicles	910	15,630	15,300	21,060	51,990
7 Other Equipment	1,070	4,290	7,070	7,550	18,910
8 Personal Emoluments	34,273	129,182	137,253	141,499	407,934
9 Running Expenses	7,091	29,380	30,025	30,940	90,345
TOTAL	43,344	194,682	203,948	214,549	613,179
*21 Houses	-	9,850	8,150	6,950	24,950
22 Other Buildings	-	900	250	250	1,400

(b) Non-British, Non-Malawi Expenditure

Telephone Equipment and Spares	-	200	200	200	600
Radio Equipment and Spares	-	150	150	150	450
Cultivating Equipment	-	75	75	75	225
Logging Equipment	-	150	175	200	525
Hickory Axe Handles	-	100	100	100	300
Explosives	-	200	250	250	700
Drill Steels	-	100	100	100	300
Rock Drills and Compressor Spares	-	400	400	400	1,200
Tree Seed	-	200	200	200	600
Insecticide & Fertiliser	-	100	100	100	300
TOTAL	-	1,675	1,750	1,775	5,200

(c) Previous Expenditure

		Cumulative Total
to 31/12/65	192,703	192,703
1966	199,774	392,477
1967	209,414	601,891
1968	208,382	810,273
1969 Printed Estimates	204,467	
1969 Revised Estimates	199,568	
1969 Estimated Carry-forward included in Jan-Mar 1970	1,980	

(d) Source of Finance

U.K. Development Loan

2. PROJECT TARGET

To establish plantations of softwood and hardwood trees to provide sufficient saw logs to make Malawi self-sufficient in construction timber.

Expected Completion Date

Continuing project, the costs of which will ultimately be fully recovered from sales.

3. BACKGROUND INFORMATION

In accordance with the Government's policy, aimed at eliminating imports of wood products or imports of materials which wood products can satisfactorily replace, this project provides for the continuation of planting both softwood and hardwood timber.

The forecast upon which the 1969 and previous years programmes have been based was the creation of 72,000 acres of timber plantations by 1990. In 1969 the total acreage of timber plantations is 32,000 leaving 40,000 acres to be established over the 20 years from 1970 to 1990, a planting programme of 2,000 acres per annum.

The timber requirement forecasts are based, as stated above, on Malawi's internal timber requirements. Mr. A. Sundelin (UNDP consultant) has proposed however that the Vipya Pulpwood project investment study must include the possibility of integrating sawmill and/or plywood manufacture with the pulp/paper mill. Such integrated sawmills would have lower operating costs than non-integrated sawmills because mill waste would find a market as supplementary raw material for the pulp mill, and power and maintenance costs could be shared with the pulp mill. He considers, subject to the investigations to be carried out in 1970, that it is likely that sawn timber and/or plywood could then be exported from the Vipya to surrounding countries competitively. This question, however, cannot be resolved until after the UNDP study is completed in 1970, and cannot therefore effect the 1970/71 planting programmes. A reduced target of 1,500 acres is therefore proposed for 1970/71, but the 1971/72 target of approximately 2,000 acres will be reinstated.

4. PROPOSED WORK 1970/71

The proposed programme of new planting in acres is as follows:

Station	1970/71	1971/72	1972/73	
Zomba Mountain	250	300	450	Softwood
Ndirande (Blantyre)	80	100	70	Softwood
Massenjere (Chikwawa)	20	200	100	Hardwood
Dedza Mountain	150	180	180	Hardwood
Chongoni (Dedza)	800	1,000	1,000	Softwood
Bunda (Lilongwe)	200	200	200	Hardwood
TOTAL	1,500	1,880	2,000	

In addition to new planting, the maintenance and protection of existing plantations must continue. Acreages in this category will be 33,500 in 1970/71 (32,000 + 1,500 to be planted early 1970), 35,000 in 1971/72 and 36,880 in 1972/73.

Maintenance and protection work includes weeding of young plantations, pruning, thinning, felling, replanting of felled areas, maintenance of buildings and roads and protection measures against fire and other destructive agencies.

5. JUSTIFICATION FOR PROPOSED WORK

The project is intended to make Malawi self-sufficient in industrial timber by 1990, gradually replacing imports of timber products (exoluding paper and paper products). The landed value of imports of timber in 1968 was £160,000.

The planting programme of 1,500 acres in 1970/71 would, if continued at the same level in future years, lead to a shortfall in 1990 on the best information now available. The planting target of approximately 2,000 acres has therefore been re-introduced for 1971/72. As can be seen below the production of timber will lag behind imports probably until after 1975, but if a larger planting programme had been undertaken in the 1940's and 1950's this situation would not have arisen.

The following table gives an estimate of revenue likely to accrue from yields of softwood timber at intervals over the next 20 years, including actual figures for 1967 and 1968 and estimates for each successive year up to 1971. The proportion of higher value timber rises sharply when major clear fellings commence in 1980 and after this date an average value (based on present day prices) of 12/- per cubic foot has been taken.

Year	Outturn cu.ft. Sawn	Value of Outturn £.
1967	156,424	70,638 (actual)
1968	203,000	107,000 (actual)
1969	240,000	126,000
1970	280,000	147,000
1971	300,000	157,500
and then as follows:-		
1973	500,000	262,500
1975	700,000	367,500

Year	Outturn cu.ft. Sawn	Value of Outturn £.
1980	2,000,000	1,200,000
1985	3,600,000	2,160,000
1990	6,000,000	3,600,000

The above figures are in respect of material suitable for conversion to sawn timber only, and exclude considerable quantities of other timber products such as poles and firewood which find a ready market.

6. EXECUTION AND SUPERVISION

All works including roads and building to be carried out by the Department of Forestry and Game.

1970/71 DEVELOPMENT ESTIMATES
APPENDIX TO PROJECT SUBMISSION

PROJECT TITLE : TIMBER PLANTATIONS

RESPONSIBLE MINISTRY/DEPARTMENT : NATURAL RESOURCES/FORESTRY & GAME

MALAWI DEVELOPMENT ESTIMATES, 1969 : HEAD 79 ITEM 1

BRITISH AIDED PROJECT NO. : 27

1. PROJECT OFFICER : The Conservator of Forests (Operations) through Regional Officers and station Technical officers.

2. FINANCIAL DETAILS

(a) Details of Expenditure	Notes	Jan-Mar 1970	1970/71	1971/72	1972/73	TOTAL 3 Yrs.
2 Buildings(M)						
Housing	(1)	-	9,850	8,150	6,950	24,950
Other Buildings	(2)	-	900	250	250	1,400
		-	10,750	8,400	7,200	26,350
4 Roads and Bridges (M)	(3)	-	5,450	5,900	6,300	17,650
6 Plant and Vehicles						
Landrovers	(4)	910	3,010	3,010	2,870	8,890
25/30cwt.Pick-ups	(5)	-	1,185	1,185	-	2,370
5 Ton Vehicles	(6)	-	3,460	5,190	5,190	13,840
Crawler Tractors	(7)	-	-	2,800	5,600	8,400
Wheeled Tractors	(8)	-	4,905	1,315	5,300	11,520
Trailers	(9)	-	600	600	600	1,800
Vehicular attachments and other plant	(10)	-	2,470	1,200	1,500	5,170
		910	15,630	15,300	21,060	51,990
7 Other Equipment						
Protective clothing	(11)	-	800	1,000	1,200	3,000
Fire fighting equipment	(12)	564	1,430	2,360	2,290	6,080
Fire fighting communications	(13)	56	400	1,600	1,950	3,950
Polythene planting pockets	(14)	-	-	900	900	1,800
Cultivating equipment	(15)	-	210	200	200	610
Surveying equipment	(16)	-	-	50	50	100
Other equipment and special tools	(17)	450	1,450	960	960	3,370
		1,070	4,290	7,070	7,550	18,910